

Oct 12 , 2011

Mr. Alan Ota
US EPA Region 9-OPINAP (E-4) WTR-2
75 Hawthorne Street
San Francisco, CA 94105

Dr. Toafa Vaiaga'e, Director
Office of the Governor, AS EPA
EOB Utulei, American Samoa 96799

Gentlemen:

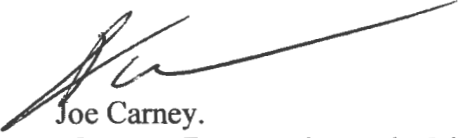
RE: OD 93-01 SECTION 6.2
Reports and Correspondence

Pursuant to the above referenced Ocean Dumping permit, the final quarterly report for OD 93-01 is enclosed.

Section 6.2.1 and Section 6.2.3

All reports and related correspondence required by General Condition 1.10, Special Conditions 3.2, 3.3, 4.3, 4.5, 4.7, 5.2, 5.3, 5.4, 6.1, and all other materials, including applications shall be submitted to **(EPA Region IX) (American Samoa Environmental Protection Agency)**.

Data compiled are for the period of July 2011 to September 2011. Analytical performance concluded all parameters were met


Joe Carney.
Manager, Engeneering and Maintenance

cc: Brett Butler, SKS General Manager
Michael Wolfram, OPINAP Program Director
File

APPENDIX B - REPORT FORM 2

Data Form for 3-Month Report on Waste Stream Analyses for StarKist Samoa MPRSA 102 Permit #OD 93-01

Reporting Period: From July 2011 to September 2011

StarKist Samoa - On Shore Storage Tank

Month & Year	Total Solids (mg/L)	Total Volatile Solids (mg/L)	5-day Biological Oxygen Demand (mg/L)	Oil & Grease (mg/L)	Total Phosphorus (mg/L)	Total Nitrogen (mg/L)	Ammonia (mg/L)	pH (pH units)	Density (g/mL)
8-Jul-11	68413	42214	52069	5887.0	685	5350	5600	7.12	1.03
OD 93-01 Permit Limits	95,760	77,170	105,900	52,110	3,080	13,370	7,640	6.2 to 7.3	0.93 to 1.05

StarKist Samoa - On Shore Storage Tank

Month & Year	Total Solids (mg/L)	Total Volatile Solids (mg/L)	5-day Biological Oxygen Demand (mg/L)	Oil & Grease (mg/L)	Total Phosphorus (mg/L)	Total Nitrogen (mg/L)	Ammonia (mg/L)	pH (pH units)	Density (g/mL)
11-Aug-11	68536	50835	46125.8	4432.5	470	5950	6050	6.89	1.01
OD 93-01 Permit Limits	95,760	77,170	105,900	52,110	3,080	13,370	7,640	6.2 to 7.3	0.93 to 1.05

StarKist Samoa - On Shore Storage Tank

Month & Year	Total Solids (mg/L)	Total Volatile Solids (mg/L)	5-day Biological Oxygen Demand (mg/L)	Oil & Grease (mg/L)	Total Phosphorus (mg/L)	Total Nitrogen (mg/L)	Ammonia (mg/L)	pH (pH units)	Density (g/mL)
2-Sep-11	70504	59178	55193.2	4850	670	4550	4800	6.92	1.01
OD 93-01 Permit Limits	95,760	77,170	105,900	52,110	3,080	13,370	7,640	6.2 to 7.3	0.93 to 1.05

Note: An asterisk (*) next to the waste concentration signifies that a violation of the permit limit has occurred.

APPENDIX B - REPORT FORM 1

**Monthly Volumes of StarKist Samoa Fish Processing Wastes Generated Per Day
and Volumes of Fish Processing Wastes Disposed at the Ocean Site**

Month : July 2011

0D 93-01	DAF Sludge Generated (gallons/day)	Cooker Water Generated (gallons/day)	Press Liquor Generated (gallons/day)	Total Generated (gallons/day)
Permit Limits	30,000	70,000	100,000	

Date	DAF Sludge Generated (gallons/day)	Cooker Juice Generated (gallons/day)	Press Liquor Generated (gallons/day)	Total Generated (gallons/day)	Volume Ocean Disposed (gallons/day)
1-Jul-11	7000	28000	35000	70000	
2-Jul-11	2250	9000	11250	22500	178000
3-Jul-11	1500	6000	7500	15000	
4-Jul-11	1000	4000	5000	10000	
5-Jul-11	5750	23000	28750	57500	
6-Jul-11	9625	38500	48125	96250	156250
7-Jul-11	7125	28500	35625	71250	
8-Jul-11	8250	33000	41250	82500	175000
9-Jul-11	750	3000	3750	7500	
10-Jul-11	500	2000	2500	5000	
11-Jul-11	3875	15500	19375	38750	
12-Jul-11	10500	42000	52500	105000	198750
13-Jul-11	6375	25500	31875	63750	
14-Jul-11	9500	38000	47500	95000	191250
15-Jul-11	8250	33000	41250	82500	
16-Jul-11	3500	14000	17500	35000	187000
17-Jul-11	2250	9000	11250	22500	
18-Jul-11	6125	24500	30625	61250	
19-Jul-11	9625	38500	48125	96250	167500
20-Jul-11	6875	27500	34375	68750	
21-Jul-11	10250	41000	51250	102500	191250
22-Jul-11	7375	29500	36875	73750	
23-Jul-11	750	3000	3750	7500	188750
24-Jul-11	1000	4000	5000	10000	
25-Jul-11	7125	28500	35625	71250	
26-Jul-11	10500	42000	52500	105000	150750
27-Jul-11	7375	29500	36875	73750	
28-Jul-11	9000	36000	45000	90000	191250
29-Jul-11	6375	25500	31875	63750	
30-Jul-11	2750	11000	13750	27500	181250
31-Jul-11	750	3000	3750	7500	
Monthly Totals	173875	695500	869375	1668750	2157000

NOTE: An asterisk (*) to the right of the fish processing waste volume signifies that a violation of the permit limit has occurred.

The number of violations are shown in the Monthly Totals row.

Monthly quantities of alum (aluminum sulfate) and coagulant polymer added to the fish processing waste streams:

Aluminum Sulfate : 16975.9Pounds/Month

Coagulant Polymer : 411.5 Pounds/Month

APPENDIX B - REPORT FORM 1

Monthly Volumes of StarKist Samoa Fish Processing Wastes Generated Per Day and Volumes of Fish Processing Wastes Disposed at the Ocean Site

Month :August 2011

0D 93-01	DAF Sludge Generated (gallons/day)	Cooker Water Generated (gallons/day)	Press Liquor Generated (gallons/day)	Total Generated (gallons/day)
Permit Limits	30,000	70,000	100,000	

Date	DAF Sludge Generated (gallons/day)	Cooker Juice Generated (gallons/day)	Press Liquor Generated (gallons/day)	Total Generated (gallons/day)	Volume Ocean Disposed (gallons/day)
1-Aug-11	1500	6000	7500	15000	
2-Aug-11	4500	18000	22500	45000	
3-Aug-11	9750	39000	48750	97500	153250
4-Aug-11	6625	26500	33125	66250	
5-Aug-11	3000	12000	15000	30000	176250
6-Aug-11	2500	10000	12500	25000	
7-Aug-11	250	1000	1250	2500	
8-Aug-11	1000	4000	5000	10000	
9-Aug-11	7625	30500	38125	76250	
10-Aug-11	8250	33000	41250	82500	186750
11-Aug-11	7125	28500	35625	71250	
12-Aug-11	7875	31500	39375	78750	184000
13-Aug-11	7750	31000	38750	77500	
14-Aug-11	250	1000	1250	2500	
15-Aug-11	4500	18000	22500	45000	
16-Aug-11	8250	33000	41250	82500	110500
17-Aug-11	8625	34500	43125	86250	
18-Aug-11	8875	35500	44375	88750	184500
19-Aug-11	8375	33500	41875	83750	
20-Aug-11	4400	17600	22000	44000	158250
21-Aug-11	750	3000	3750	7500	
22-Aug-11	500	2000	2500	5000	
23-Aug-11	6625	26500	33125	66250	
24-Aug-11	9500	38000	47500	95000	
25-Aug-11	5250	21000	26250	52500	160750
26-Aug-11	8250	33000	41250	82500	
27-Aug-11	1000	4000	5000	10000	
28-Aug-11	500	2000	2500	5000	
29-Aug-11	6875	27500	34375	68750	
30-Aug-11	10000	40000	50000	100000	168750
31-Aug-11	7750	31000	38750	77500	
Monthly Totals	168025	672100	840125	1665250	1483000

NOTE: An asterisk (*) to the right of the fish processing waste volume signifies that a violation of the permit limit has occurred.
The number of violations are shown in the Monthly Totals row.

Monthly quantities of alum (aluminum sulfate) and coagulant polymer added to the fish processing waste streams:

Aluminum Sulfate : 15958.3 Pounds/Month
Coagulant Polymer : 375.7 Pounds/Month

APPENDIX B - REPORT FORM 1

**Monthly Volumes of StarKist Samoa Fish Processing Wastes Generated Per Day
and Volumes of Fish Processing Wastes Disposed at the Ocean Site**

Month : Sep 2011

0D 93-01	DAF Sludge Generated (gallons/day)	Cooker Water Generated (gallons/day)	Press Liquor Generated (gallons/day)	Total Generated (gallons/day)
Permit Limits	30,000	70,000	100,000	

Date	DAF Sludge Generated (gallons/day)	Cooker Juice Generated (gallons/day)	Press Liquor Generated (gallons/day)	Total Generated (gallons/day)	Volume Ocean Disposed (gallons/day)
1-Sep-11	11000	44000	55000	110000	189500
2-Sep-11	9000	36000	45000	90000	
3-Sep-11	8250	33000	41250	82500	185000
4-Sep-11	7000	28000	35000	70000	
5-Sep-11	1500	6000	7500	15000	
6-Sep-11	750	3000	3750	7500	
7-Sep-11	1000	4000	5000	10000	122500
8-Sep-11	6625	26500	33125	66250	
9-Sep-11	8875	35500	44375	88750	191750
10-Sep-11	8375	33500	41875	83750	
11-Sep-11	10500	42000	52500	105000	181750
12-Sep-11	6625	26500	33125	66250	
13-Sep-11	2250	9000	11250	22500	137500
14-Sep-11	9375	37500	46875	93750	
15-Sep-11	8625	34500	43125	86250	175000
16-Sep-11	11750	47000	58750	117500	
17-Sep-11	7750	31000	38750	77500	155000
18-Sep-11	7250	29000	36250	72500	
19-Sep-11	1250	5000	6250	12500	
20-Sep-11	2250	9000	11250	22500	138750
21-Sep-11	6500	26000	32500	65000	
22-Sep-11	10125	40500	50625	101250	191250
23-Sep-11	5875	23500	29375	58750	
24-Sep-11	8750	35000	43750	87500	188000
25-Sep-11	4750	19000	23750	47500	
26-Sep-11	11125	44500	55625	111250	
27-Sep-11	2250	9000	11250	22500	193750
28-Sep-11	5125	20500	25625	51250	
29-Sep-11	9750	39000	48750	97500	200000
30-Sep-11	6250	25000	31250	62500	
Monthly Totals	200500	802000	1002500	2005000	2249750

NOTE: An asterisk (*) to the right of the fish processing waste volume signifies that a violation of the permit limit has occurred.
The number of violations are shown in the Monthly Totals row.

Monthly quantities of alum (aluminum sulfate) and coagulant polymer added to the fish processing waste streams:

Aluminum Sulfate : 19111.8 Pounds/ Month
Coagulant Polymer : 458.3 Pounds/ Month

StarKist Samoa CO
Ocean Dump Site Monitoring Reports

July 01, 2011		TSS mg/l SKS	TVSS mg/l SKS	TP mg/l SKS	TN mg/l SKS	O&G mg/l SKS	Ammonia mg/l SKS
	Depth (m)						
Station 1	control-1	6.0	2.5	0.015	0.40	0.49	0.042
	control-3	5.0	3.0	0.015	0.25	0.59	0.037
	control-10	4.5	2.0	0.020	0.45	0.12	0.031
	1	4.5	3.0	0.005	0.25	0.38	0.043
	3	5.0	3.0	0.025	0.40	0.25	0.048
	10	5.5	3.5	0.025	0.10	0.34	0.032
Station 2	1	4.5	2.5	0.000	0.20	0.24	0.037
	3	6.0	3.0	0.015	0.20	0.12	0.041
	10	5.5	2.5	0.020	0.25	0.24	0.044
Station 3	1	4.5	2.5	0.015	0.15	0.23	0.043
	3	5.0	3.5	0.035	0.25	0.24	0.027
	10	5.0	2.5	0.025	0.45	0.25	0.041
Station 4	1	5.5	2.5	0.005	0.20	0.12	0.044
	3	5.0	2.5	0.015	0.55	0.27	0.051
	10	4.0	2.5	0.045	0.15	0.38	0.051
Station 5	1	4.5	2.5	0.025	0.40	0.35	0.036
	3	5.0	2.5	0.015	0.20	0.13	0.051
	10	6.5	2.5	0.040	0.10	0.47	0.047

Aug - 12- 2011		TSS mg/l SKS	TVSS mg/l SKS	TP mg/l SKS	TN mg/l SKS	O&G mg/l SKS	Ammonia mg/l SKS
	Depth (m)						
Station 1	control-1	5.5	2.5	0.010	0.30	0.45	0.039
	control-3	4.5	3.0	0.000	0.45	0.58	0.042
	control-10	4.5	2.5	0.010	0.45	0.34	0.036
	1	6.0	3.5	0.000	0.50	0.50	0.044
	3	5.5	2.0	0.015	0.25	0.62	0.035
	10	4.0	1.5	0.015	0.65	0.63	0.040
Station 2	1	5.0	2.5	0.025	0.25	0.62	0.032
	3	4.5	3.0	0.025	0.25	0.59	0.039
	10	4.0	2.5	0.005	0.50	0.34	0.032
Station 3	1	5.0	2.5	0.010	0.25	0.38	0.023
	3	5.5	3.0	0.020	0.55	0.25	0.043
	10	4.5	2.5	0.000	0.25	0.47	0.037
Station 4	1	6.0	2.5	0.025	0.25	0.35	0.037
	3	5.0	2.5	0.030	0.30	0.63	0.050
	10	4.5	3.0	0.010	0.45	0.38	0.026
Station 5	1	4.5	4.0	0.015	0.25	0.49	0.048
	3	5.5	3.5	0.025	0.10	0.26	0.049
	10	6.5	3.0	0.025	0.05	0.71	0.042

TSS is reported as non-filterable residue

TVSS is reported as volatile non-filterable residue

StarKist Samoa CO
Ocean Dump Site Monitoring Reports

Sep - 02 - 2011		TSS mg/l SKS	TVSS mg/l SKS	TP mg/l SKS	TN mg/l SKS	O&G mg/l SKS	Ammonia mg/l SKS
	Depth (m)						
Station 1	control-1	4.5	2.5	0.015	0.35	0.69	0.020
	control-3	5.0	3.0	0.015	0.15	0.45	0.025
	control-10	4.5	2.0	0.015	0.25	0.62	0.038
	1	4.5	1.5	0.005	0.25	0.34	0.027
	3	5.0	2.5	0.020	0.05	0.35	0.018
	10	5.5	3.0	0.025	0.20	0.56	0.022
Station 2	1	5.5	2.0	0.020	0.00	0.58	0.041
	3	5.0	2.5	0.010	0.15	0.56	0.037
	10	5.0	2.5	0.000	0.20	0.36	0.023
Station 3	1	4.5	2.0	0.005	0.20	0.58	0.038
	3	5.5	1.5	0.010	0.05	0.34	0.039
	10	5.0	2.0	0.000	0.10	0.37	0.030
Station 4	1	4.5	3.0	0.005	0.15	0.47	0.043
	3	4.0	2.5	0.030	0.15	0.60	0.017
	10	5.5	2.5	0.010	0.10	0.49	0.028
Station 5	1	5.0	2.5	0.020	0.35	0.46	0.038
	3	5.5	1.5	0.015	0.25	0.50	0.050
	10	5.0	3.0	0.010	0.20	0.58	0.044

TSS is reported as non-filterable residue

TVSS is reported as volatile non-filterable residue

Ocean Disposal Site Monitoring Report

(OD Permit 93-01 & 93-02)

09 July, 2011

Monitoring Vessel:	F/V Blue Moon
Discharge Vessel:	F/V Blue Moon
Chief Investigator:	Mike Crook
Starkist Samoa Liaison:	Joe Carney
STP/Tri Marine Liaison:	Craig Double
Determination of Sampling Positions:	All positions obtained by GPS Satellite Navigation

Mike Crook
P.O. Box 4933
Pago Pago, AS 96799
13 July, 2011


Introduction

On 09 July, 2011 the tank-ship *Blue Moon* departed Starkist Samoa dock bound for the designated ocean dump-site area approximately seven miles south of Pago Pago Harbor, American Samoa, on a routine wastewater disposal operation and for the purpose of monitoring this disposal of tuna cannery generated hi-strength liquid wastes into the waters of the Pacific Ocean. This monitoring and reporting were conducted in compliance with general permit conditions and Appendix A of Ocean Dumping Permits OD 93-01 & OD 93-02.

Chronology of Events

- 0520:** The *Blue Moon* departed Pago Pago Harbor bound for the dump-site location with Master/Principal Investigator, Chief and Mate on board.
- 0615:** The *Blue Moon* entered the dumpzone circle @ 14°22.6' S x 170°38.7' W.
- 0625:** The *Blue Moon* arrived at the dump-zone center, where observed SE winds and slight south to southeasterly seas initially indicated disposal operations be conducted in the southeastern (SE) dump-zone quadrant.
- 0635:** Control Station Monitoring. The *Blue Moon* arrived 1.1 nautical miles (NM) up-current or southeast (SE) of the dump-zone center, where discrete seawater samples were taken from depths of 1, 3, and 10 meters. Water temperatures, color, pH and observed sea/sky conditions with stations' position were recorded (Table 1). Seas at this time were slight with SE swells to 1.5 meters and east winds at 12 knots (kts.) with the barometer reading 29.62. Current set and drift of the ship, by GPS, were to the northwest at 0.8 knots. No floating materials or sea life were observed here.
- 0645:** The *Blue Moon* began disposal operations in the SE dump zone quadrant and continued discharging cargo (high strength waste water) with a northeast (NE) to southwest (SW) reciprocal, elongated elliptical pattern, approximately 2.25 miles long (see Plot 1) until 0925 hrs.
- 0930:** Station One Monitoring (See Plot #1). Discrete water samples were drawn from depths of 1, 3, and 10 meters. Water temperatures, pH, stations' position and water color observations were all recorded in Table 1. The SE wind had increased to 15 kts. with mostly cloudy skies. The waste plume, visibly present here as a heavy surface sheen, also had a sparse presence of suspended material as described in Table 1. The current/wind drift of the ship was GPS determined to be northwesterly (NW) @ 1.0 knots. No sea- life was observed.

- 0940:** Station Two Monitoring. Station two was sampled with the same procedures as station one with measurements and observations being recorded in Table 1. This position showed no visible sign of either the typical waste plume sheen or the suspended particulates noted at Station #1. The average drift rate of the ship with current and wind was GPS determined here to be northwesterly (NW) at a rate of 1.1 knots between Stations #2 & 3 (See Plot #1). No sea-life was noted at this position.
- 0950:** Station Three Monitoring. Seawater samples were collected and measurements taken as with Stations 1 & 2. This position, 0.25 NM down-current (NW) of Station #2, again showed no sign of the plume's characteristic surface sheen or additional floating / suspended particulate material. Sea & wind conditions remained the same as with the previous two sample stations and the drift rate of the ship between Stations #3 & 4 was 0.9 knots, again, to the northwest.
- 0935:** Station Four monitoring. This area was the visible 'leading edge' of the waste plume and showed both the typical but heavy surface sheen and also had a sparse concentration of large (3-5 mm), light brown colored suspended particulate material. The northwesterly current/drift rate of the ship was again noted here to be at 1.1 knots. No sea-life was observed.
- 1025:** Station Five monitoring. Sampling for this final station was conducted 0.25 miles down-current or NW of Station #4 and was approximately 0.34 NM south of the zone center (See Plot #1). This location showed clear, natural appearing blue water as well as further down-current to the northwest. No additional suspended particulate material was visible. The final drift rate of the ship was noted to be to the NW at 1.2 knots. Other than a few random seabirds flying, no significant sea life was observed at this position or any of the previous stations. The final barometer reading was 29.65 when monitoring activities were concluded at 1020 hrs. The *Blue Moon* exited the disposal zone at 1030 hours and arrived back in Pago Pago Harbor to deliver the collected samples to the Starkist Samoa Company laboratory at 1120 hours.

Prepared by 
Mike Crook,
Principal Investigator

OCEAN DUMPING RESEARCH PERMIT: OD-93-01 & 02

Table 1

Date: 09 July, 2011	<u>Sea Conditions:</u> Slight w/ Southeast swells to 1.5 meters.				<u>Wind:</u> SE @ 10 - 15 knots	<u>Visibility:</u> Good, 6 - 10+ NM
	<u>Barometer:</u> 29.60 - 29.65		<u>Current Set & Drift Rate:</u> Northwest @ average 1.1 knots		<u>Sky:</u> Partly Cloudy, 50 - 75%	
Time	Station	Depth (meters)	Temp. (°C)	pH	Odor	Color
0635	Control	1	26.7	8.2	None	Clear and natural deep pelagic blue w/ no floating or suspended materials.
		3	26.7	8.2		
		10	26.7	8.2		
0930	Station 1	1	26.7	8.2	Slightly Pungent	Broken patches of heavy surface sheen along with sparse, small, brown colored suspended particulates, not dense in concentration extending to the limit of visibility .
		3	26.7	8.2		
		10	26.7	8.2		
0940	Station 2	1	27.0	8.2	Slightly Pungent	In the center of the waste plume ellipse, no sheen or evidence of the discharge. Heavy surface sheen areas further down-current to the northwest. No particulates or floating scum.
		3	27.0	8.2		
		10	26.7	8.2		
0950	Station 3	1	27.2	8.2	None	Same as Station #2. Clear and natural deep pelagic blue w/ no floating or suspended materials. No sign of the wastewater plume at this position.
		3	27.2	8.2		
		10	27.2	8.2		
1000	Station 4	1	27.2	8.2	Slightly Pungent	Leading edge of the waste plume. Heavy glassy surface sheen w/ large, brownish lumpy particulate material, suspended not floating and present down to the limit of visibility but not dense in concentration.
		3	27.0	8.2		
		10	27.0	8.2		
1010	Station 5	1	27.0	8.2	Pungent	Sampled 0.25 NM down-current (NW) of Station #4 and 0.34 NM south of the disposal zone center. Location showed deep, clear, natural appearing blue water. No more suspended or floating particulate material or sea life noted.
		3	27.0	8.2		
		10	26.7	8.2		

SAMPLE STATIONS POSITIONS

	LATITUDE		LONGITUDE	
Control - C	14° 24.63'	South	170° 37.39'	West
Station 1	14° 24.83'	South	170° 37.18'	West
Station 2	14° 24.72'	South	170° 37.43'	West
Station 3	14° 24.61'	South	170° 37.69'	West
Station 4	14° 24.50'	South	170° 37.94'	West
Station 5	14° 24.25'	South	170° 38.33'	West

N ▲

170 30.23 W

170 36.82 W

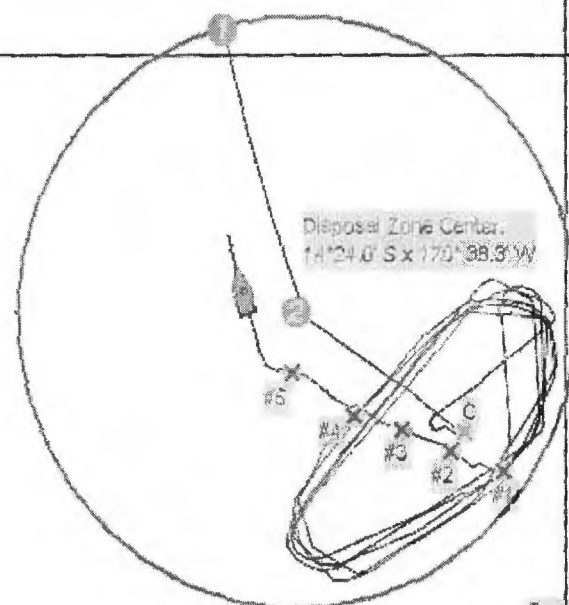
170 33.41 W

PLOT #1
Ocean Monitoring Sampling Stations
Control (C) and Sampling Stations #1 - #5
09 July, 2011

M. Crook

M. Crook, Investigator

14 22.73 S



Current Set: Northwest

14 26.14 S

Ocean Disposal Site Monitoring Report


(OD Permit 93-01 & 93-02)

12 August, 2011

Monitoring Vessel:	F/V Blue Moon
Discharge Vessel:	F/V Blue Moon
Chief Investigator:	Mike Crook
Starkist Samoa Liaison:	Joe Carney
STP/Tri Marine Liaison:	Craig Double
Determination of Sampling Positions:	All positions obtained by GPS Satellite Navigation

Mike Crook
P.O. Box 4933
Pago Pago, AS 96799
17 August, 2011

- 0945:** Station Two Monitoring. Station two was sampled with the same procedures as station one with measurements and observations being recorded in Table 1. This position showed similar coloration qualities as those at Station #1, with the addition of a sparse concentration of fine, light brownish colored floating and suspended particulate materials. The average drift rate of the ship with current and wind was GPS determined here to be westerly (W) at a rate of 0.3 knots between stations 2 & 3 (See Plot #1). No sea-life or floating materials were noted at this position.
- 0955:** Station Three Monitoring. Seawater samples were collected and measurements taken as with Stations 1 & 2. This position showed a broad area of broken streaks and patches of moderate surface sheen over clear sub-surface waters. Sea & wind conditions remained the same as with the previous two sample stations and the drift rate of the ship between Stations #3 & 4 was 0.3 knots, again, to the west.
- 1005:** Station Four monitoring. This area showed more patches of moderate surface sheen very similar to Stations # 1 & 3. This position was at the forefront or leading edge of the wastewater plume as it drifted toward the west. The current/drift rate of the ship was again noted here to be at 0.3 knots. No sea-life was observed.
- 1015:** Station Five monitoring. Sampling for this final station was conducted 0.25 NM down-current from Station #4 and just about at the disposal zone center (See Plot #1), with clear, natural appearing blue waters further down-current to the west. The final drift rate of the ship was noted to be 0.3 knots. Other than a few random seabirds flying by, no significant sea life was observed at this position or any of the previous stations. The final barometer reading was 29.63 when monitoring activities were concluded at 1030 hrs. The *Blue Moon* exited the disposal zone at 1038 hours and arrived back in Pago Pago Harbor to deliver the collected samples to the Starkist Samoa Co. laboratory at 1130 hours.

Prepared by 
Mike Crook, Principal Investigator

OCEAN DUMPING RESEARCH PERMIT: OD-93-01 & 02

Table 1

<u>Date:</u> 12 August, 2011	<u>Sea Conditions:</u> Slight w/ Easterly swells to 1.5 meters.				<u>Wind:</u> East @ 7 - 15 knots	<u>Visibility:</u> Unlimited
	<u>Barometer:</u> 29.62 ^ 29.65 ' 29.63				<u>Current Set & Drift Rate:</u> West @ average 0.33 knots	<u>Sky:</u> Partly cloudy, 30 - 35%
Time	Station	Depth (meters)	Temp. (°C)	pH	Odor	Color
0625	Control	1	26.1	8.2	None	Clear and natural deep pelagic blue w/ no floating or suspended materials.
		3	26.1	8.2		
		10	26.1	8.2		
0935	Station 1	1	26.7	8.2	None	Patches of light to moderate surface sheen over deep, blue & clear water. No floating or suspended materials
		3	26.7	8.2		
		10	26.7	8.2		
0945	Station 2	1	27.0	8.2	Slightly Pungent	More broken patches of light surface sheen along with fine & light brownish colored floating & suspended particulates, not particularly dense in concentration, extending down to the limit of visibility.
		3	27.0	8.2		
		10	26.7	8.2		
0955	Station 3	1	27.0	8.2	Slightly Pungent	Same as Station #1.
		3	27.0	8.2		
		10	26.7	8.2		
1005	Station 4	1	27.0	8.2	Slightly Pungent	Same as Stations # 1 & 3 w/ no floating or suspended particulates. This position was along the visual, north to south extending, 'leading edge' of the waste plume.
		3	27.0	8.2		
		10	27.0	8.2		
1015	Station 5	1	27.0	8.2	None	No visual indication of the wastewater plume w/ deep, clear and natural appearing blue seawater. Sampled 0.25 NM down-current (West) from Station #4.
		3	27.0	8.2		
		10	27.0	8.2		

SAMPLE STATIONS POSITIONS

	LATITUDE		LONGITUDE	
Control - C	14° 24.03'	South	170° 37.20'	West
Station 1	14° 24.06'	South	170° 36.92'	West
Station 2	14° 24.04'	South	170° 37.22'	West
Station 3	14° 23.94'	South	170° 37.67'	West
Station 4	14° 23.96'	South	170° 37.94'	West
Station 5	14° 23.98'	South	170° 38.17'	West

N ▲

170 39.90 W

170 37.00 W

170 34.10 W

4 21.30 S

PLOT #1

Ocean Monitoring Sampling Stations
Control (C) and Sampling Stations #1 - #5
12 August, 2011

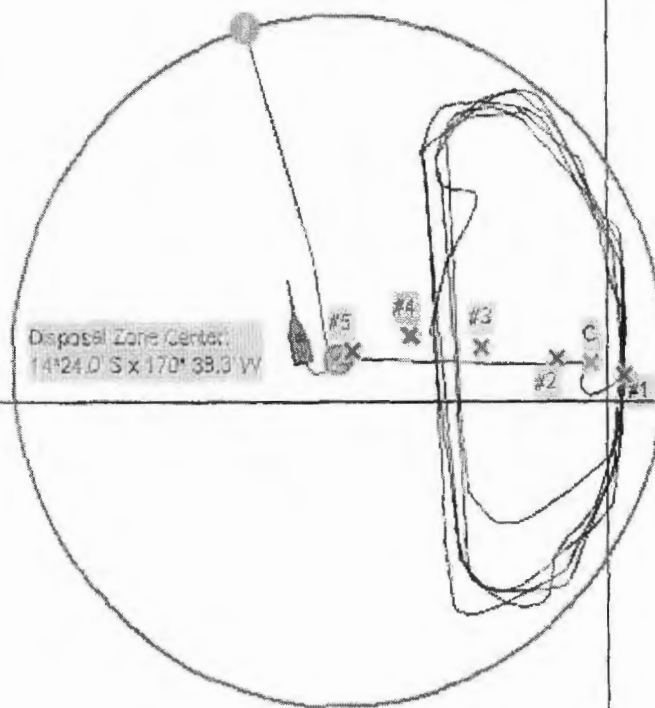
M. Crook

M. Crook, Investigator

Disposal Zone Center:
14°24.0' S x 170°38.0' W

4 24.20 S

←
Current Set: West



Ocean Disposal Site Monitoring Report

(OD Permit 93-01 & 93-02)

01 September, 2011

Monitoring Vessel:	F/V Blue Moon
Discharge Vessel:	F/V Blue Moon
Chief Investigator:	Mike Crook
Starkist Samoa Liaison:	Joe Carney
STP/Tri Marine Liaison:	Craig Double
Determination of Sampling Positions:	All positions obtained by GPS Satellite Navigation

Mike Crook
P.O. Box 4933
Pago Pago, AS 96799
06 September, 2011

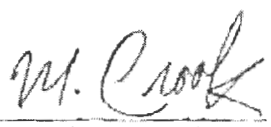
Introduction

On September 1, 2011 the tank-ship *Blue Moon* departed Starkist Samoa dock bound for the designated ocean dump-site area approximately seven miles south of Pago Pago Harbor, American Samoa, on a routine wastewater disposal operation and for the purpose of monitoring this disposal of tuna cannery generated hi-strength liquid wastes into the waters of the Pacific Ocean. This monitoring and reporting were conducted in compliance with general permit conditions and Appendix A of Ocean Dumping Permits OD 93-01 & OD 93-02.

Chronology of Events

- 0520:** The *Blue Moon* departed Pago Pago Harbor bound for the dump-site location with Master/Principal Investigator, Chief and Mate on board.
- 0612:** The *Blue Moon* entered the dumpzone circle @ 14°22.5' S / 170°38.6' W.
- 0622:** The *Blue Moon* arrived at the dump-zone center, where observed northeasterly winds and slight easterly seas initially indicated disposal operations be conducted in the northeastern dump-zone quadrant.
- 0635:** Control Station Monitoring. The *Blue Moon* arrived 1.1 nautical miles (NM) up-current or northeast (NE) of the dump-zone center, where discrete seawater samples were taken from depths of 1, 3, and 10 meters. Water temperatures, color, pH and observed sea/sky conditions with station's position were recorded (Table 1). Seas at this time were slight with easterly swells to 1.5 meters and a NE breeze of 10 knots with the barometer reading 29.66. Current set and drift, of the ship, were to the southwest at 1.3 knots.
- 0645:** The *Blue Moon* began disposal operations in the NE dump zone quadrant and continued discharging cargo (high-strength waste water) with a northwest to SE reciprocal, elongated elliptical pattern, approximately 2.25 miles long (see Plot 1) until 1000 hrs.
- 1010:** Station One Monitoring. Discrete water samples were drawn from depths of 1, 3, and 10 meters. Water temperatures, pH, stations' position and water color observations were all recorded in Table 1. The NE winds had increased slightly to 15 knots with still, partly cloudy skies. The waste plume appeared here as an oblong area defined by glassy track lines of light to moderate surface sheen, extending in a northwest (NW) to SE direction and moving to the southwest (SW). The current/wind drift of the ship was now GPS determined to be westerly @ 1.0 knots. No sea life or floatable materials were observed.

- 1020:** Station Two Monitoring. Station two was sampled with the same procedures as station one with measurements and observations being recorded in Table 1. This position showed moderate glassy surface sheen but no floating or suspended particulate material. The average drift rate of the ship with current and wind was GPS determined to be southwesterly at 1.2 knots between stations 2 & 3 (See Plot #1). No sea-life was noted at this position.
- 1030:** Station Three Monitoring. Seawater samples were collected and measurements taken as with Stations 1 & 2. This position showed only some fragmented streaks of light glassy surface sheen over clear blue water. The drift rate of the ship between Stations #3 & 4 was again 1.1 knots to the SW.
- 1040:** Station Four monitoring. Standard sampling procedures were again carried out as in previous stations. This position, 0.25 NM SW of Station #3, showed the typical heavy glassy surface sheen characteristic of the waste plume as well as many swaths or clumpings of floating, large, brownish particulate material. The same particulates were also suspended in the water column down to the limit of visibility. The SW current/drift rate of the ship was again noted here to be at 1.1 knots.
- 1050:** Station Five monitoring. Sampling for this final station was conducted at the visual leading edge of the waste plume and approximately 0.15 NM south of the zone center (See Plot #1). The leading edge of the waste plume was clearly visible at this location as a NW to SE extending old track line of heavy glassy surface sheen with clear, natural appearing blue waters further down-current to the southwest. Also present in and under this sheen, were more large, floating & suspended particulates as described at Station #4. The final drift rate of the ship was noted to be 1.2 knots again, to the SW. Other than a few random seabirds flying by, no notable sea life was observed at this position or any of the previous stations. The final barometer reading was 29.69 when monitoring activities were concluded at 1058 hrs. The *Blue Moon* exited the disposal zone at 1110 hours and arrived back in Pago Pago Harbor to deliver the collected samples to the Starkist Samoa Co. laboratory at 1200 hours.

Prepared by 
Mike Crook, Principal Investigator

OCEAN DUMPING RESEARCH PERMIT: OD-93-01 & 02

Table 1

<u>Date:</u> September 1, 2011	<u>Sea Conditions:</u> Slight w/ Easterly swells to 1.5 meters.				<u>Wind:</u> East @ 10 - 15 knots		<u>Visibility:</u> Unlimited
	<u>Barometer:</u> 29.65 ^ 29.69		<u>Current Set & Drift Rate:</u> Southwest @ average 1.2 knots			<u>Sky:</u> Partly cloudy, 30 - 60%	
Time	Station	Depth (meters)	Temp. (°C)	pH	Odor	Color	
0635	Control	1	25.6	8.2	None	Clear and natural deep pelagic blue w/ no floating or suspended materials.	
		3	25.6	8.2			
		10	25.6	8.2			
1010	Station 1	1	27.0	8.2	None	A few scattered patches of light surface sheen over deep, blue & clear water. No floating or suspended materials	
		3	27.0	8.2			
		10	27.0	8.2			
1020	Station 2	1	26.7	8.2	Slightly Pungent	Broken patches and streaks of moderate surface sheen over deep, clear blue water. No floating scum or other particulate type materials present.	
		3	26.7	8.2			
		10	26.7	8.2			
1030	Station 3	1	27.0	8.2	Slightly Pungent	Same as Station #1.	
		3	27.0	8.2			
		10	26.7	8.2			
1040	Station 4	1	26.7	8.2	Pungent	In a long northwest to southeast extending track line of heavy surface sheen with many floating swaths of large brown particulates that were also present suspended in the water column to limit of visibility.	
		3	26.4	8.2			
		10	26.4	8.2			
1050	Station 5	1	26.7	8.2	Pungent	Leading Edge of the waste plume. Distinct boundary of heavy surface sheen along with the same floating and suspended particulates as described at Station #4 but not as dense. Clear & natural blue seas further down-current to the southwest	
		3	26.7	8.2			
		10	26.7	8.2			

SAMPLE STATIONS POSITIONS

	LATITUDE		LONGITUDE	
Control - C	14° 23.43'	South	170° 37.40'	West
Station 1	14° 23.22'	South	170° 37.13'	West
Station 2	14° 23.41'	South	170° 37.34'	West
Station 3	14° 23.62'	South	170° 37.54'	West
Station 4	14° 23.87'	South	170° 37.81'	West
Station 5	14° 24.13'	South	170° 38.19'	West

N ▲

170 41.98 W

170 38.55 W

170 35.12 W

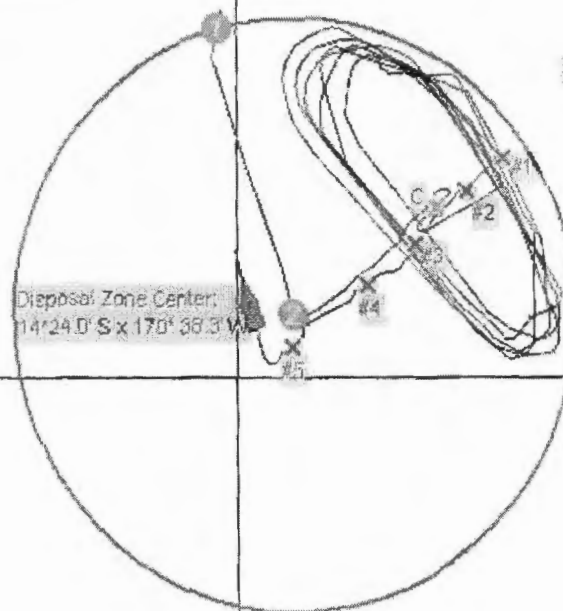
14 20.93 S

PLOT #1
Ocean Monitoring Sampling Stations
Control (C) and Sampling Stations #1 - #5
01 September, 2011

M. Crook

M. Crook, Investigator

14 24.36 S



Current Set: Southwest

Disposal Zone Center:
14°24.0' S x 170°38.3' W

OCEAN DUMPING MONTHLY SUMMARY

F/V BLUE MOON

July, 2011

NUMBER OF TRIPS:	Starkist	Other	Joint	TOTAL:
	12	0	0	12

GALLONS-FOR THE MONTH:	Starkist	Other	Joint	TOTAL:
	2,164,000	0	0	2,164,000

GALLONS FOR SOLO TRIPS:	Starkist	Other
	2,164,000	0

RUNNING TIME ON TRIPS: 62.2 hrs.

DISCHARGE TIME ON TRIPS: 34.03 hrs.

AV. GPM DISCHARGE RATE: 121.7 gal/min/kt

AV. TRIP TIME: 5.18 hrs.

AV. PERCENTAGE OF VESSEL USED BY EACH CANNERY - BY GALLONAGE:

Starkist	Other
100.00%	0.00%

MASTER:

M. Crook

Date: 07/02/11 Sat.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5447

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded: SK

Other

Total

178,000	Gallons
0	Gallons
178,000	Gallons

Trip # 1 - X

Trip # 2

Begin 1st Loading SKFinish 1st Loading SKBegin 2nd Loading SKFinish 2nd Loading SK

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0530	Depart Starkist	14°16.50' S 170°41.2' W	East-12	60	29.58	Metric	kts	True*
0625	Arrive Edge of Zone #1	14°22. S 170°38. W	East-15	90	29.59	E to SE-2.0	8.4	166
0633	Arrive Zone Center #2	14°24.0 S 170°38.3 W	" "	"	"	" "	8.2	165
0645	Begin Discharge #3	14°24.04 S 170°37.19 W	" "	"	"	" " X	8.2	090
0700	#4	14°23.88 S 170°37.71 W	" "	"	29.60	" "	8.4	178
" 15	Remarks: #5	14°24.59 S 170°36.78 W	East-18	"	"	" "	8.6	009
" 30	#6	14°25.31 S 170°37.74 W	" "	"	"	" "	8.3	186
" 45	#7	14°25.09 S 170°37.60 W	" "	"	"	" "	8.0	073
0800	#8	14°23.51 S 170°36.79 W	" "	80	"	" "	8.5	338
" 15	#9	14°24.12 S 170°37.74 W	" "	"	"	" "	8.6	179
" 30	#10	14°24.55 S 170°37.07 W	" "	"	"	" "	8.8	016
" 45	#11	14°23.61 S 170°37.85 W	" "	"	29.61	" "	8.9	183
0900	#12	14°24.97 S 170°37.42 W	East-20	75	"	" "	8.7	011
" 15	#13	14°23.21 S 170°37.89 W	" "	"	"	" "	8.8	187
" 30	#14	14°24.76 S 170°37.76 W	" "	80	"	" "	9.0	176
" 45	#15	14°23.34 S 170°37.07 W	" "	"	29.62	" "	9.1	321
	#16	14°2 S 170°3 W						
	#17	14°2 S 170°3 W					15	
	#18	14°2 S 170°3 W						
	#19	14°2 S 170°3 W						
	#20	14°2 S 170°3 W						
		14°2 S 170°3 W						
		14°2 S 170°3 W					20	
		14°2 S 170°3 W						
0950	Finish Discharge #16	14°23.04 S 170°37.53 W	East-20	80%	29.62	E to SE-2.0	8.8	272
0955	Exit Discharge Zone #17	14°22.60 S 170°37.88 W	" "	"	"	" "	9.3	331
1050	Secure SK Dock	14°16.50 S 170°41.2 W						

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 185 mins. Average Speed During Discharge: 8.6 kts. Total Time Run 5.33 hr.Navigational Plot made: Y 20 Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 112 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ☒U.S.C.G.M.S.D. ☒

Master: F/V Blue Moon

M. Crook

NA

170 41.28 W

170 37.92 W

170 34.56 W

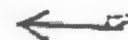
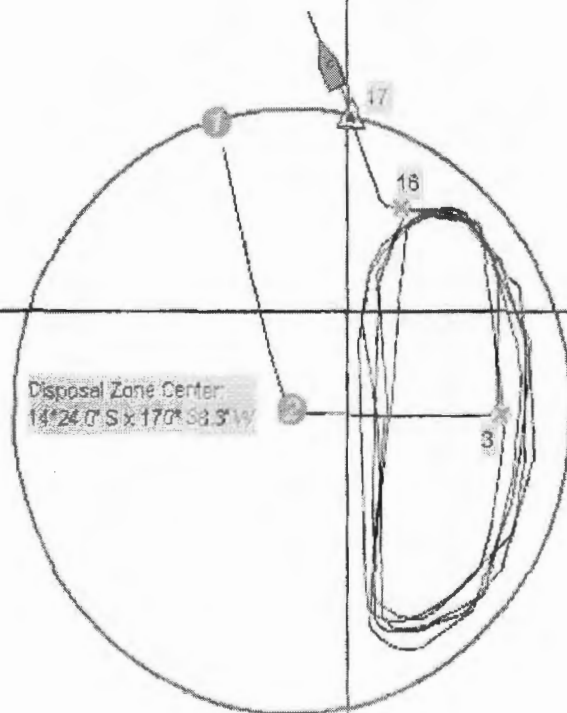
02 July, 2011 - Sat.
Voyage # 5447
Sterkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

14 23.52 S

Disposal Zone Center:
14°24.0' S x 170°38.5' W



Wind East @ 15 - 20 kts.

Date: 07/06/11 Weds.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5448

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

156,250

0

156,250

Gallons

Gallons

Gallons

7/5 1800 Begin 1st Loading SK
 2130 Finish 1st Loading SK
 0200 Begin 2nd Loading SK
 7/6 0530 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
						Metric	kts	True*
0545	Depart Starkist	14°16.50' S 170°41.2' W	SE-12	80	29.60			
0635	Arrive Edge of Zone #1	14°22.57' S 170°38.68' W	" "	100	"	SE-2.0	8.4	162
0645	Arrive Zone Center #2	14°24.0' S 170°38.3' W	" "	"	"	" "	8.0	160
0653	Begin Discharge #3	14°24.54' S 170°37.39' W	" "	"	"	" " X	8.2	135
0708	#4	14°24.00' S 170°37.44' W	" "	"	29.61	" "	8.6	224
" 23	Remarks: #5	14°24.96' S 170°37.36' W	" "	"	"	" "	8.5	018
" 38	#6	14°24.03' S 170°37.38' W	" "	90	"	" "	8.7	222
" 53	#7	14°24.58' S 170°36.89' W	SE-15	"	"	" "	8.4	021
0808	#8	14°24.12' S 170°37.50' W	" "	80	29.62	" "	8.8	209
" 23	#9	14°25.26' S 170°37.68' W	SE-20	"	"	" "	8.5	053
" 38	#10	14°24.05' S 170°37.43' W	" "	"	"	" "	8.7	206
" 53	#11	14°24.83' S 170°37.35' W	" "	"	"	" "	8.7	051
0908	#12	14°23.97' S 170°37.43' W	" "	"	29.63	" "	9.1	214
" 23	#13	14°2' S 170°3' W						
" 38	#14	14°2' S 170°3' W						
" 53	#15	14°2' S 170°3' W						
	#16	14°2' S 170°3' W						
	#17	14°2' S 170°3' W					15	
	#18	14°2' S 170°3' W						
	#19	14°2' S 170°3' W						
	#20	14°2' S 170°3' W						
		14°2' S 170°3' W					20	
		14°2' S 170°3' W						
0920	Finish Discharge #13	14°23.89' S 170°37.51' W	SE-20	80%	29.64	SE-2.0	9.0	332
0928	Exit Discharge Zone #14	14°22.51' S 170°37.73' W	" "	"	"	" "	9.4	330
1030	Secure SK Dock	14°16.50' S 170°41.2' W						

Current Direction: At Center NWEnd of Discharge NWDischarge Pattern EllipseTotal Discharge Time: 147 mins. Average Speed During Discharge: 8.65 kts. Total Time Run 4.75 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 123 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



N ▲

170 40.23 W

170 36.82 W

170 33.41 W

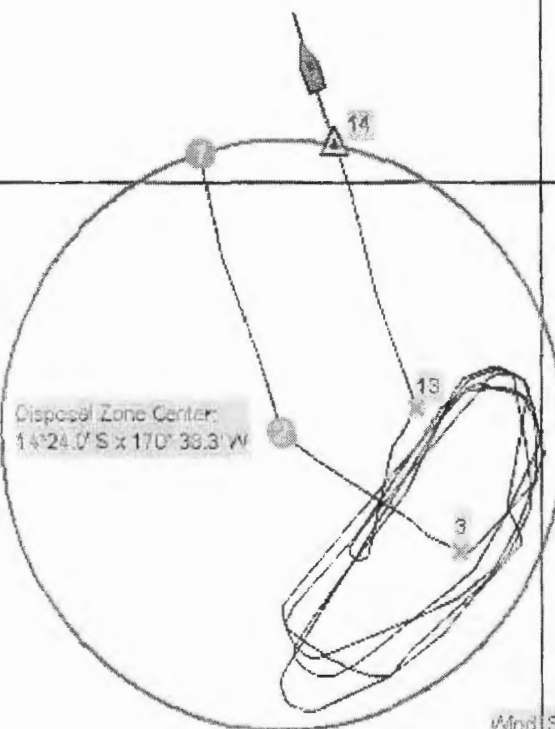
14 22.73 S

14 26.14 S

06 July, 2011 - Weds.
Voyage # 5448
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
FV Blue Moon



Date: 07/09/11 Sat

F/V Blue Moon Ocean Dumping Log

Voyage #: 5449

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

175,000

Gallons

Other

0

Gallons

Total

175,000

Gallons

Trip #1 - X

Trip #2

717 1530 Begin 1st Loading SK
 2135 Finish 1st Loading SK
 0930 Begin 2nd Loading SK
 718 1115 Finish 2nd Loading SK

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course	
0520		Depart Starkist	14°16.50' S 170°41.2' W	SE-10	50	29.60	Metric	kts	True*
0615	#1	Arrive Edge of Zone	14°22.56' S 170°38.69' W	SE-12	"	29.61	SE-1.5	8.2	161
0625	#2	Arrive Zone Center	14°24.0' S 170°38.3' W	"	60	29.62	"	8.0	163
0645	#3	Begin Discharge	14°24.54' S 170°37.52' W	"	"	"	X	7.5	045
0700	#4		14°24.40' S 170°37.83' W	"	"	29.63	"	8.8	223
15	#5	Remarks:	14°24.59' S 170°36.97' W	"	70	"	"	8.2	022
30	#6	Monitoring	14°24.65' S 170°37.98' W	"	75	29.64	"	8.8	218
45	#7	Center of Discharge	14°24.61' S 170°37.04' W	"	"	"	5	8.4	025
0800	#8	at Position:	14°24.76' S 170°38.05' W	SE-15	"	"	"	9.0	220
15	#9		14°24.57' S 170°36.87' W	"	"	"	"	8.8	013
30	#10	14°24.63' S	14°24.93' S 170°38.17' W	"	29.65	"	"	9.1	217
45	#11	170°37.39' W	14°24.19' S 170°36.98' W	"	"	"	"	9.0	011
0900	#12		14°24.98' S 170°38.27' W	"	"	"	10	9.2	209
15	#13		14°24.36' S 170°36.95' W	"	"	"	"	9.1	000
30	#14		14°2' S 170°3' W						
45	#15		14°2' S 170°3' W						
1000	#16		14°2' S 170°3' W						
	#17		14°2' S 170°3' W				15		
	#18		14°2' S 170°3' W						
	#19		14°2' S 170°3' W						
	#20		14°2' S 170°3' W						
			14°2' S 170°3' W						
			14°2' S 170°3' W				20		
			14°2' S 170°3' W						
0925	#14	Finish Discharge	14°24.66' S 170°37.12' W	SE-15	75%	29.65	SE-1.5	8.8	179
1030	#15	Exit Discharge Zone	14°22.63' S 170°38.96' W	"	"	"	"	9.4	338
1120		Secure SK Dock	14°16.50' S 170°41.2' W						

Current Direction: At Center NW

End of Discharge NW

Discharge Pattern Ellipse

Total Discharge Time: 160 mins. Average Speed During Discharge: 8.7 kts. Total Time Run 6.0 hr.

Navigational Plot made: YES Presence of Plume? No

Time and position of any floating material: None

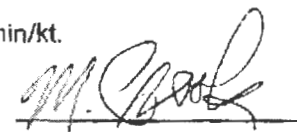
Discharge Rate: 125.7 Gallons/min/kt.

Unusual Occurrences? None

Notifications made: A.S.P.A. ✓

U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



N ▲

170 40.23 W

170 36.82 W

170 33.41 W

09 July, 2011 - Sat
Voyage # 5449
Starkist Cargo, Trip #1
Ocean Monitoring Conducted

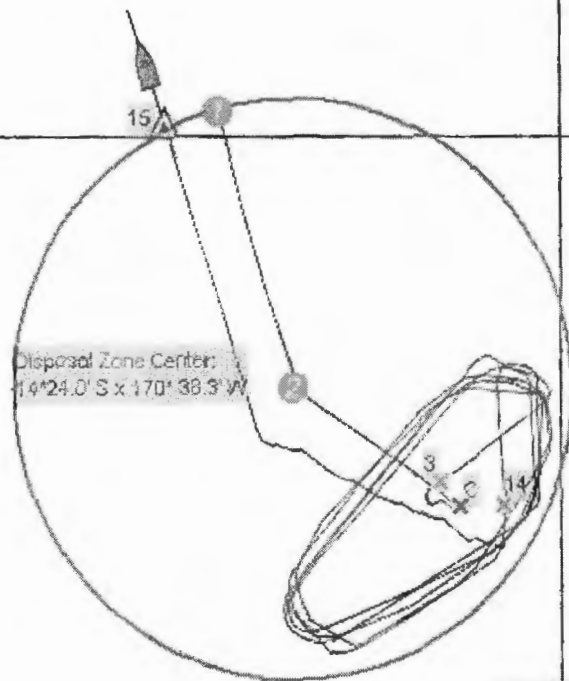
M. Crook

M. Crook, Master
FV Blue Moon

14 22.73 S

Disposal Zone Center:
14°24.0' S x 170°38.3' W

14 26.14 S



Wind: Southeast @ 12-15 kts

Date: 07/12/11 Tues.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5450

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

198,750

0

198,750

Gallons

Gallons

Gallons

7/11 1630 Begin 1st Loading SK
 2145 Finish 1st Loading SK
 7/12 0130 Begin 2nd Loading SK
 0400 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
1155	Depart Starkist		14°16.50' S	170°41.2' W	ESE-12	60	29.69			
1250	Arrive Edge of Zone	#1	14°22.57' S	170°38.68' W	ESE-18	40	"	SE-1.5	8.0	161
1300	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	"	"	"	"	8.2	164
1310	Begin Discharge	#3	14°24.54' S	170°37.37' W	"	"	29.68	X	8.2	135
" 25		#4	14°24.47' S	170°37.71' W	"	50	"	"	8.1	219
" 40	Remarks:	#5	14°24.72' S	170°37.60' W	"	"	29.66	"	8.5	019
" 55		#6	14°24.45' S	170°37.81' W	"	60	29.65	"	8.6	208
1410		#7	14°25.08' S	170°37.40' W	"	"	"	"	8.3	050
" 25		#8	14°23.95' S	170°37.50' W	SE-15	Light Rain	29.63	"	8.7	216
" 40		#9	14°24.93' S	170°37.24' W	"	60	"	"	8.8	053
" 55		#10	14°24.04' S	170°37.57' W	"	"	29.62	"	8.9	220
1510		#11	14°25.17' S	170°37.74' W	"	"	"	"	9.0	062
" 25		#12	14°23.85' S	170°36.75' W	"	50	"	"	9.3	294
" 40		#13	14°25.29' S	170°38.12' W	"	"	29.61	"	8.5	075
" 55		#14	14°24.68' S	170°36.78' W	"	40	"	"	9.2	354
		#15	14°2' S	170°3' W						
		#16	14°2' S	170°3' W						
		#17	14°2' S	170°3' W					15	
		#18	14°2' S	170°3' W						
		#19	14°2' S	170°3' W						
		#20	14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W					20	
			14°2' S	170°3' W						
1600	Finish Discharge	#15	14°23.87' S	170°37.35' W	SE-15	40%	29.61	SE-1.5	9.4	241
1613	Exit Discharge Zone	#16	14°22.57' S	170°38.36' W	"	"	"	"	9.5	336
1705	Secure SK Dock		14°16.50' S	170°41.2' W						

Current Direction: At Center NWEnd of Discharge NWDischarge Pattern EllipseTotal Discharge Time: 170 mins. Average Speed During Discharge: 8.73 kts. Total Time Run 5.16 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 134 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

N ▲

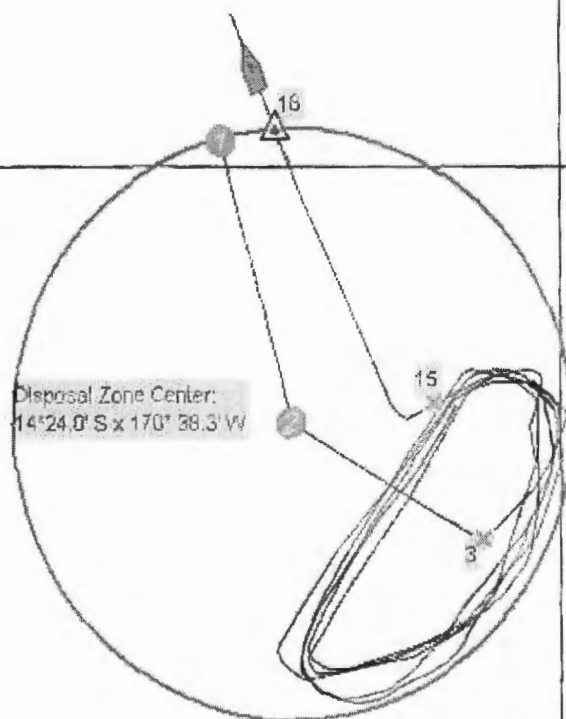
170 30.23 W

170 36.82 W

170 33.41 W

14 22.73 S

Disposal Zone Center:
14°24.0' S x 170° 38.3' W



12 July, 2011 - Tues
Voyage # 5450
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

Wind: Southeast @ 12-18 kts.

14 26.14 S

Date: 07/14/11 Thurs.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5451

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

191,250

Gallons

0

Gallons

191,250

Gallons

Trip # 1 - X

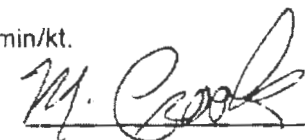
Trip # 2

7/13 1540 Begin 1st Loading SK
 2130 Finish 1st Loading SK
 0200 Begin 2nd Loading SK
 7/14 0300 Finish 2nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course	
											True*
0540	Depart Starkist		14°16.50' S	170°41.2' W	East-10	100 Rain	29.65	Metric			
0637	Arrive Edge of Zone	#1	14°22.58' S	170°38.60' W	East-15	70	29.66	East-2.0	8.0	164	
0647	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	" "	60	"	"	7.7	161	
0655	Begin Discharge	#3	14°24.15' S	170°37.23' W	East-18	"	"	East-2.5X	7.9	090	
0710		#4	14°23.36' S	170°37.78' W	" "	60	"	"	8.4	184	
" 25	Remarks:	#5	14°25.08' S	170°37.27' W	" "	"	"	"	8.2	023	
" 40		#6	14°23.34' S	170°36.95' W	" "	"	"	"	8.6	319	
" 55		#7	14°24.32' S	170°37.66' W	East-20	"	"	"	8.5	182	
0810		#8	14°24.61' S	170°37.01' W	" "	"	"	"	8.6	004	
" 25		#9	14°23.04' S	170°37.60' W	" "	50	"	"	8.4	181	
" 40		#10	14°24.56' S	170°36.73' W	" "	"	"	"	8.8	009	
" 55		#11	14°23.11' S	170°37.16' W	East-22	"	"	"	9.0	297	
0910		#12	14°24.65' S	170°37.66' W	" "	40	29.67	"	8.9	180	
" 25		#13	14°23.92' S	170°36.84' W	" "	"	"	"	8.8	001	
" 40		#14	14°24.04' S	170°37.75' W	" "	"	29.68	"	9.0	179	
" 55		#15	14°2' S	170°3' W							
		#16	14°2' S	170°3' W							
		#17	14°2' S	170°3' W					15		
		#18	14°2' S	170°3' W							
		#19	14°2' S	170°3' W							
		#20	14°2' S	170°3' W							
			14°2' S	170°3' W							
			14°2' S	170°3' W					20		
			14°2' S	170°3' W							
0955	Finish Discharge	#15	14°23.10' S	170°37.60' W	East-22	40%	29.68	East-2.5	9.1	338	
0958	Exit Discharge Zone	#16	14°22.69' S	170°37.73' W	" "	50%	"	"	9.2	386	
1050	Secure SK Dock		14°16.50' S	170°41.2' W							

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 186 mins. Average Speed During Discharge: 8.63 kts. Total Time Run 5.2 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: None Discharge Rate: 123 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



N ▲

170 40.23 W

170 36.82 W

170 33.41 W

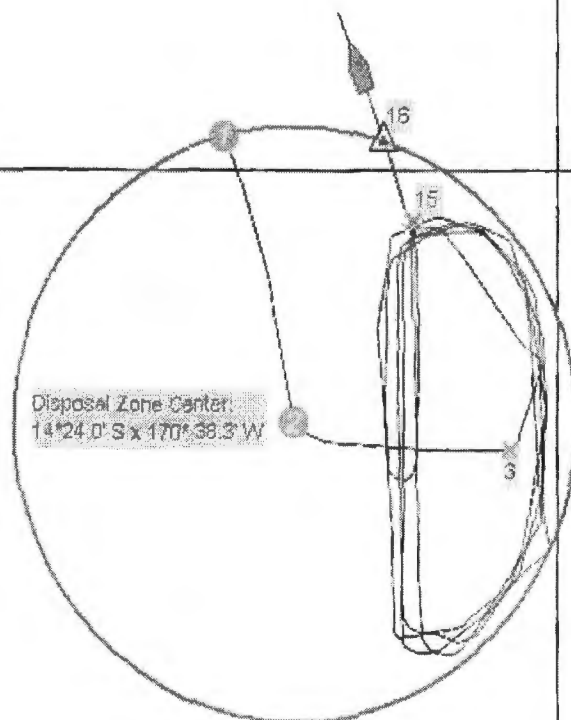
22.73 S

26.14 S

14 July, 2011 - Thurs.
Voyage # 5451
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
FV Blue Moon



Disposal Zone Center:
14°24.0' S x 170°38.3' W



Wind East @ 15 - 22 kts.

Date: 07/16/11 Sat.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5452

Time

Permit # OD 93-01 & OD 93-02

7/15

0100 Begin 1st Loading SK
 0200 Finish 1st Loading SK
 1615 Begin 2nd Loading SK
 2145 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

Volume Loaded:

SK

Other

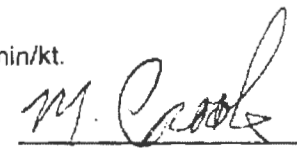
Total

187,000 Gallons
 0 Gallons
 187,000 Gallons

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course	
								Metric	kts	True*	
0530	Depart Starkist		14°16.50' S	170°41.2' W	East-10	20	29.60				
0623	Arrive Edge of Zone	#1	14°22.55' S	170°38.66' W	East-12	15	"	East-1.5	8.2	160	
0633	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	" "	"	"	"	7.9	162	
0640	Begin Discharge	#3	14°24.12' S	170°37.23' W	" "	"	"	"	8.0	090	
" 55		#4	14°23.51' S	170°37.71' W	" "	"	"	"	8.4	178	
0710	Remarks:	#5	14°24.82' S	170°37.35' W	East-15	"	"	"	8.5	081	
" 25		#6	14°22.98' S	170°37.33' W	" "	"	"	"	8.8	286	
" 40		#7	14°24.24' S	170°37.81' W	" "	"	"	"	8.6	180	
" 55		#8	14°23.69' S	170°36.95' W	" "	"	29.59	"	8.5	007	
0810		#9	14°23.31' S	170°37.83' W	" "	10	"	"	8.7	185	
" 25		#10	14°24.86' S	170°37.11' W	" "	"	"	"	8.6	031	
" 40		#11	14°22.95' S	170°37.60' W	East-18	"	29.60	"	8.9	264	
" 55		#12	14°24.81' S	170°37.64' W	" "	"	"	"	9.1	172	
0910		#13	14°23.17' S	170°37.12' W	" "	"	"	"	9.0	341	
" 25		#14	14°24.35' S	170°37.83' W	" "	"	"	"	9.2	183	
" 40		#15	14°2' S	170°3' W							
		#16	14°2' S	170°3' W							
		#17	14°2' S	170°3' W					15		
		#18	14°2' S	170°3' W							
		#19	14°2' S	170°3' W							
		#20	14°2' S	170°3' W							
			14°2' S	170°3' W							
			14°2' S	170°3' W					20		
			14°2' S	170°3' W							
0935	Finish Discharge	#15	14°23.24' S	170°37.77' W	East-18	10%	29.60	East-1.5	9.3	000	
0940	Exit Discharge Zone	#16	14°22.57' S	170°38.62' W	" "	"	"	"	9.5	338	
1035	Secure SK Dock		14°16.50' S	170°41.2' W							

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 175 mins. Average Speed During Discharge: 8.74 kts. Total Time Run 5.1 hr.Navigational Plot made: Y&Z Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 122.3 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



N ▲

170 40.23 W

170 36.82 W

170 33.41 W

14 22.73 S

Disposal Zone Center:
14°24.0' S x 170°38.3' W

18 July, 2011 - Sat.
Voyage # 5452
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Wind: East @ 12-18 kts.

14 26.14 S

Date: 07/19/11 Tues.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5453

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

167,500

Gallons

0

Gallons

167,500

Gallons

Begin 1st Loading SKFinish 1st Loading SKBegin 2nd Loading SKFinish 2nd Loading SK

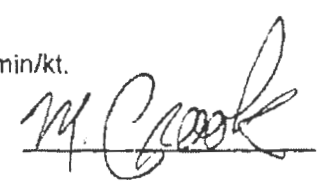
Trip # 1 - X

Trip # 2

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
0520	Depart Starkist		14°16.50' S	170°41.2' W	East-5	25	29.58			
0602	Arrive Edge of Zone	#1	14°22.56' S	170°38.63' W	East-7	"	"	East-1.0	8.5	164
0612	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	"	20	"		8.7	162
0620	Begin Discharge	#3	14°24.08' S	170°37.23' W	East-10	"	29.59	X	8.3	090
" 35		#4	14°23.72' S	170°37.69' W	"	"			8.5	179
" 50	Remarks:	#5	14°23.24' S	170°36.97' W	"	"			8.5	008
0705		#6	14°23.33' S	170°37.84' W	"	"			8.6	183
" 20		#7	14°24.75' S	170°37.10' W	"	"			8.5	019
" 35		#8	14°23.13' S	170°37.17' W	East-7	"			9.0	211
" 50		#9	14°25.09' S	170°37.63' W	"	15			8.7	151
0805		#10	14°23.70' S	170°37.00' W		"			9.1	348
" 20		#11	14°23.81' S	170°37.84' W		"			8.7	183
" 35		#12	14°24.27' S	170°36.98' W		"		10	9.2	012
" 50		#13	14°23.39' S	170°37.84' W		10			9.1	177
0905		#14	14°24.74' S	170°37.79' W		"			8.6	339
" 20		#15	14°2' S	170°3' W		"				
" 35		#16	14°2' S	170°3' W						
		#17	14°2' S	170°3' W				15		
		#18	14°2' S	170°3' W						
		#19	14°2' S	170°3' W						
		#20	14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W				20		
			14°2' S	170°3' W						
0915	Finish Discharge	#15	14°23.26' S	170°37.75' W	East-7	10%	29.75	East-1.0	9.4	337
0920	Exit Discharge Zone	#16	14°22.61' S	170°37.95' W					9.6	334
1015	Secure SK Dock		14°16.50' S	170°41.2' W						

Current Direction: At Center WestEnd of Discharge West SlowDischarge Pattern EllipseTotal Discharge Time: 165 mins. Average Speed During Discharge: 8.8 kts. Total Time Run 4.9 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 115 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ☒ U.S.C.G.M.S.D. ☒

Master: F/V Blue Moon



N ▲

170 40.23 W

170 36.82 W

170 33.41 W

14 22.73 S

Disposal Zone Center:
14°24'0" S x 170°38.3' W

14 26.14 S

19 July, 2011 - Tues.
Voyage # 5453
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

Wind: East @ 7 - 10 kts.

Date: 07/21/11 Thurs.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5454

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

191,250	Gallons
0	Gallons
191,250	Gallons

Trip # 1 - X

Trip # 2

7/20

7/21

1700	Begin 1 st Loading SK
2145	Finish 1 st Loading SK
0100	Begin 2 nd Loading SK
0230	Finish 2 nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
0640	Depart Starkist		14°16.50' S	170°41.2' W	East-5	25	29.51			
0735	Arrive Edge of Zone	#1	14°22.60' S	170°38.81' W	East-10	"	29.52	ESE-S-2.0	8.1	159
0745	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	" "	"	"		8.0	164
0755	Begin Discharge	#3	14°24.06' S	170°37.21' W	" "	35	"	X	8.0	090
0810		#4	14°23.62' S	170°37.73' W	" "	"	"		8.7	178
25	Remarks:	#5	14°24.43' S	170°36.98' W	" "	"	"		8.5	010
40		#6	14°23.18' S	170°37.77' W	East-12	"	"		8.3	189
55		#7	14°24.76' S	170°37.14' W	" "	40	"	5	8.6	032
0910		#8	14°23.25' S	170°37.07' W	" "	"	"		8.8	296
25		#9	14°24.65' S	170°37.90' W	East-15	"	"		8.9	183
40		#10	14°23.90' S	170°36.96' W	" "	"	"		8.7	000
55		#11	14°24.65' S	170°37.90' W	" "	"	"		9.1	180
1010		#12	14°24.39' S	170°36.95' W	" "	"	"	10	9.2	007
25		#13	14°23.16' S	170°37.73' W	" "	"	"		8.8	180
40		#14	14°25.04' S	170°37.38' W	" "	"	"		8.6	011
55		#15	14°2' S	170°3' W	" "	"	"			
		#16	14°2' S	170°3' W	" "	"	"			
		#17	14°2' S	170°3' W	" "	"	"	15		
		#18	14°2' S	170°3' W	" "	"	"			
		#19	14°2' S	170°3' W	" "	"	"			
		#20	14°2' S	170°3' W	" "	"	"			
			14°2' S	170°3' W	" "	"	"			
			14°2' S	170°3' W	" "	"	"	20		
			14°2' S	170°3' W	" "	"	"			
1055	Finish Discharge	#15	14°23.04' S	170°37.26' W	East-15	30%	29.52	ESE-S-2.0	8.9	278
1059	Exit Discharge Zone	#16	14°22.70' S	170°37.65' W	" "	35%	"	"	9.5	321
1155	Secure SK Dock		14°16.50' S	170°41.2' W	" "	"	"			

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 180 mins. Average Speed During Discharge: 8.7 kts. Total Time Run 5.25 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 122 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: FV Blue Moon

M. Carole

N ▲

170 40.23 W

170 36.82 W

170 33.41 W

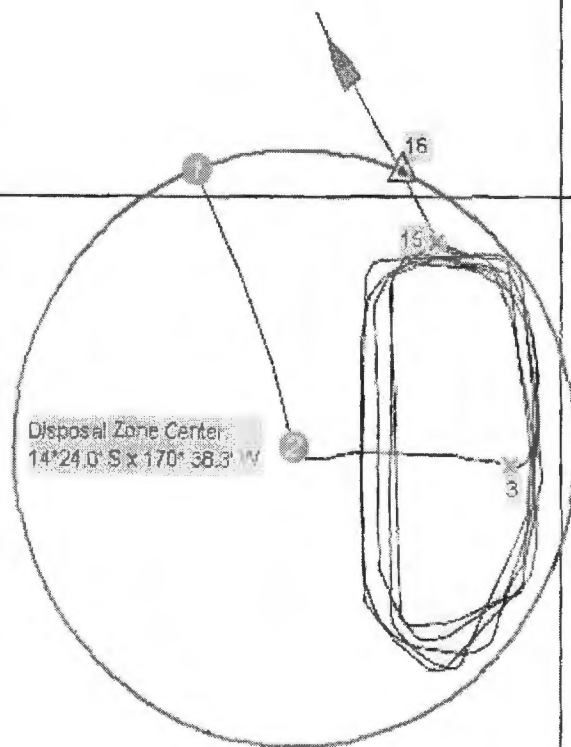
14 22.73 S

14 26.14 S

21 July, 2011 - Thurs.
Voyage # 5454
Starkest Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Disposal Zone Center:
14°24.0' S x 170°38.3' W



Wind East @ 10 - 15 kts.

Date: 07/23/11 Sat.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5455

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

188,750	Gallons
0	Gallons
188,750	Gallons

Trip # 1 - X

Trip # 2

7/22	1535	Begin 1 st Loading SK
	2145	Finish 1 st Loading SK
7/23	0110	Begin 2 nd Loading SK
	0300	Finish 2 nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
0515	Depart Starkist		14°16.50' S	170°41.2' W	Calm	25	29.57			
0610	Arrive Edge of Zone	#1	14°22.57' S	170°38.65' W	"	60	29.59	ESE-1.0	8.6	163
0618	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	"	"		" "	8.3	158
0625	Begin Discharge	#3	14°24.06' S	170°37.25' W	"	"		" X	8.7	090
0640		#4	14°23.57' S	170°37.67' W	"	"			8.6	178
0655	Remarks:	#5	14°24.28' S	170°36.87' W		"			8.5	006
0710		#6	14°23.29' S	170°37.61' W		50			8.7	177
0725		#7	14°24.82' S	170°37.10' W		"			8.4	031
0740		#8	14°23.00' S	170°37.33' W		"	29.60		8.8	318
0755		#9	14°24.74' S	170°37.54' W	ENE-3	60			9.1	179
0810		#10	14°23.30' S	170°37.07' W	" "	70			8.9	324
0825		#11	14°24.93' S	170°37.55' W	ENE-5	"			8.9	183
0840		#12	14°23.84' S	170°36.93' W	" "	60			9.1	002
0855		#13	14°23.87' S	170°37.64' W	" "	"			9.5	176
0910		#14	14°24.32' S	170°37.44' W	" "	50			9.3	354
0925		#15	14°2' S	170°3' W						
0940		#16	14°2' S	170°3' W						
		#17	14°2' S	170°3' W					15	
		#18	14°2' S	170°3' W						
		#19	14°2' S	170°3' W						
		#20	14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W					20	
			14°2' S	170°3' W						
0920	Finish Discharge	#15	14°22.93' S	170°37.76' W	ENE-5	50%	29.60	ESE 1.0	9.2	337
0923	Exit Discharge Zone	#16	14°22.58' S	170°37.98' W	" "	"	"	"	9.5	338
1015	Secure SK Dock		14°16.50' S	170°41.2' W						

Current Direction: At Center

End of Discharge

Discharge Pattern

Total Discharge Time: 175 mins.

Average Speed During Discharge: 8.9 kts.

Total Time Run 5.8 hr.

Navigational Plot made: Yes

Presence of Plume? No

Time and position of any floating material: None

Discharge Rate: 121.2 Gallons/min/kt.

Unusual Occurrences? None

Notifications made: A.S.P.A. ✓

U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



170 41.98 W

170 38.55 W

170 35.12 W

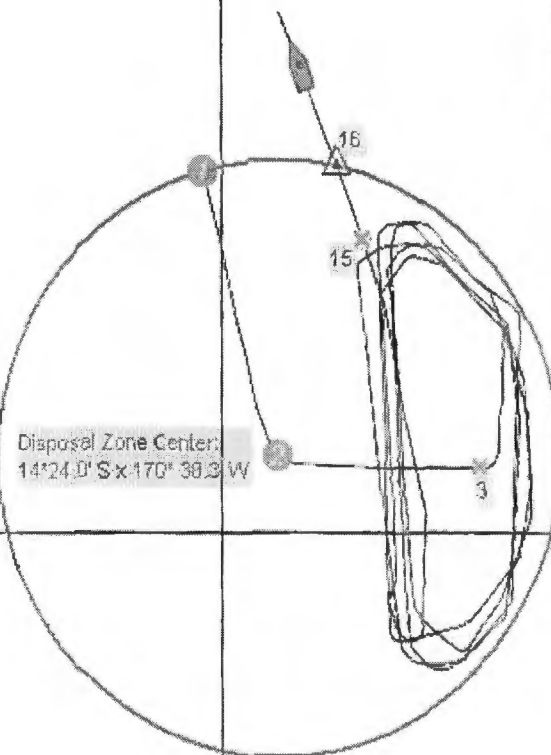
93 S

23 July, 2011 - Sat.
Voyage # 5455
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

36 S



Disposal Zone Center:
14°24.0' S x 170° 38.5 W

Wind: Calm to ENE @ 5 kts.

Date: 07/26/11 Tues.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5456

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

157,750	Gallons
0	Gallons
157,750	Gallons

Trip # 1 - X

Trip # 2

7/25

7/26

1900	Begin 1 st Loading SK
2150	Finish 1 st Loading SK
0100	Begin 2 nd Loading SK
0430	Finish 2 nd Loading SK

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
						Metric	kts	True*
0525	Depart Starkist	14°16.50' S 170°41.2' W	East-10	100	29.54			
0620	Arrive Edge of Zone	#1 14°22.56' S 170°38.67' W	" "	"	29.55	E+SE-1.5	8.6	160
0630	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	" "	"	"	" "	8.5	164
0640	Begin Discharge	#3 14°24.07' S 170°37.21' W	East-12	90	29.56	" " X	8.2	090
" 55		#4 14°23.80' S 170°37.65' W	" "	"	29.57	" "	8.6	179
0710	Remarks:	#5 14°25.16' S 170°37.49' W	" "	"	"	"	8.1	041
" 25		#6 14°23.20' S 170°37.13' W	" "	"	"	"	8.5	305
" 40		#7 14°24.61' S 170°37.71' W	" "	"	"	"	8.6	181
" 55		#8 14°23.33' S 170°37.09' W	" "	"	"	"	8.8	342
0810		#9 14°23.55' S 170°37.78' W	" "	80	"	"	8.7	183
" 25		#10 14°24.62' S 170°36.98' W	East-15	70	"	"	8.9	004
" 40		#11 14°23.16' S 170°37.70' W	" "	60	29.58	"	9.0	182
" 55		#12 14°24.85' S 170°37.16' W	" "	50	"	"	8.8	033
0910		#13 14°23.27' S 170°37.08' W	" "	"	"	"	9.2	315
" 25		#14 14°2' S 170°3' W	" "	"	"	"	"	"
" 40		#15 14°2' S 170°3' W	" "	"	"	"	"	"
		#16 14°2' S 170°3' W	" "	"	"	"	"	"
		#17 14°2' S 170°3' W	" "	"	"	"	15	"
		#18 14°2' S 170°3' W	" "	"	"	"	"	"
		#19 14°2' S 170°3' W	" "	"	"	"	"	"
		#20 14°2' S 170°3' W	" "	"	"	"	"	"
		14°2' S 170°3' W	" "	"	"	"	20	"
		14°2' S 170°3' W	" "	"	"	"	"	"
0915	Finish Discharge	#14 14°23.00' S 170°37.61' W	East-15	50%	29.58	E+SE-1.5	9.1	263
0919	Exit Discharge Zone	#15 14°22.64' S 170°37.98' W	" "	"	"	"	9.3	332
1020	Secure SK Dock	14°16.50' S 170°41.2' W	" "	"	"	"	"	"

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 155 mins. Average Speed During Discharge: 8.7 kts. Total Time Run 5.0 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 117 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



1420.93 S

170-41.98 WY

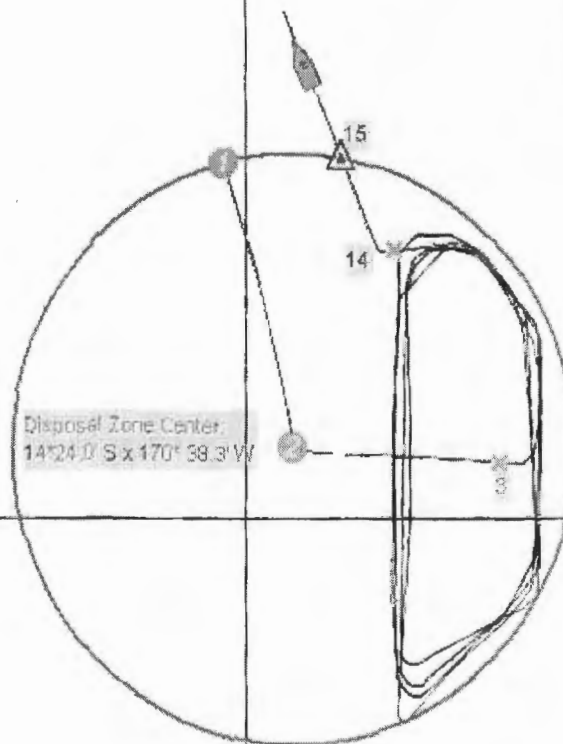
170 38.55 W

170 35-12 W

26 July, 2011 - Tues.
Voyage # 5456
Starkist Cargo, Trip #1

M. Crowl

M. Crook, Master
FV Blue Moon



Disposal Zone Center:
14°24.0' S x 170° 38.3' W

Wind East @ 10-15 kts.

424.36 S

Date: 07/28/11 Thurs.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5457

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

191,250	Gallons
0	Gallons
191,250	Gallons

7/27 1630 Begin 1st Loading SK
 2145 Finish 1st Loading SK
 0100 Begin 2nd Loading SK
 7/28 0200 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
0545	Depart Starkist		14°16.50' S	170°41.2' W	ESE-15	100 - Rain	29.62			
0643	Arrive Edge of Zone	# 1	14°22.57' S	170°38.61' W	ESE-20	100	29.64	ESE-3.0	7.8	162
0653	Arrive Zone Center	# 2	14°24.0 S	170°38.3 W	" "	"	29.65		7.5	153
0703	Begin Discharge	# 3	14°24.37' S	170°37.28 W	ESE-25	"	"	X	7.3	115
" 18		# 4	14°24.91' S	170°37.87 W	"	"	"		7.6	078
" 33	Remarks:	# 5	14°24.23' S	170°37.89 W	"	"	"		8.2	305
" 48		# 6	14°24.61' S	170°37.67 W	"	"	29.66		8.8	256
0803		# 7	14°24.96' S	170°37.62 W	"	"	"	5	7.4	110
" 18		# 8	14°24.58' S	170°37.41 W	"	90	"		7.7	097
" 33		# 9	14°24.56' S	170°38.11 W	"	"	29.67		9.1	252
" 48		# 10	14°24.07' S	170°37.91 W	"	"	"		9.3	321
0903		# 11	14°24.00' S	170°37.45 W	"	"	"		8.2	108
" 18		# 12	14°24.65' S	170°38.23 W	"	80	"	10	9.4	249
" 33		# 13	14°24.49' S	170°37.48 W	"	"	"		9.7	313
" 48		# 14	14°24.06' S	170°37.60 W	"	90	"		8.5	104
1003		# 15	14°2 S	170°3 W						
		# 16	14°2 S	170°3 W						
		# 17	14°2 S	170°3 W				15		
		# 18	14°2 S	170°3 W						
		# 19	14°2 S	170°3 W						
		# 20	14°2 S	170°3 W						
			14°2 S	170°3 W						
			14°2 S	170°3 W				20		
			14°2 S	170°3 W						
1003	Finish Discharge	# 15	14°24.15' S	170°38.12 W	ESE-25	95 %	29.67	ESE-3.0	9.4	339
1013	Exit Discharge Zone	# 16	14°22.62' S	170°38.67 W	" "	100 %	"	" "	9.4	336
1105	Secure SK Dock		14°16.50' S	170°41.2' W						

Current Direction: At Center NWEnd of Discharge NWDischarge Pattern Figure 8Total Discharge Time: 180 mins. Average Speed During Discharge: 8.56 kts. Total Time Run 5.33 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: None Discharge Rate: 124 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Crook

N ▲

170 41.98 W

170 38.55 W

170 35.12 W

14 20.93 S

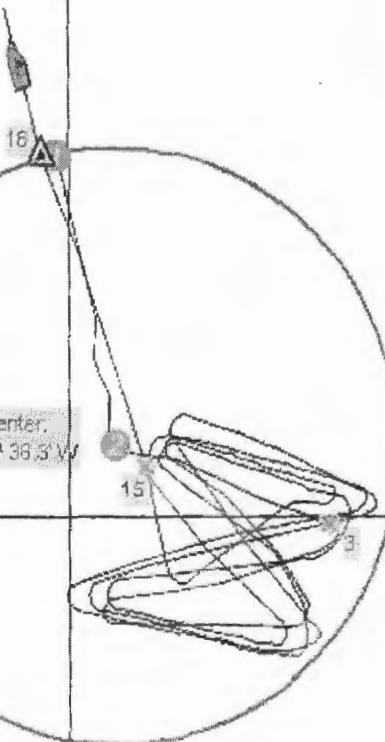
26 July, 2011 - Thurs.
Voyage # 5457
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

14 24.36 S

Disposal Zone Center:
14°24.0' S x 170°38.3' W



Wind: ESE @ 15-25 kts.

Date: 07/31/11 Sun.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5458

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded: SK

Other

Total

181,250	Gallons
0	Gallons
181,250	Gallons

Trip # 1 - X

Trip # 2

1600	Begin 1 st Loading SK
2140	Finish 1 st Loading SK
0030	Begin 2 nd Loading SK
0210	Finish 2 nd Loading SK

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
						Metric	kts	True*
0550	Depart Starkist	14°16.50' S 170°41.2' W	East-10	75	29.61			
0645	Arrive Edge of Zone	#1 14°22.56' S 170°38.67' W	East-15	50	"	East-1.5	8.6	162
0654	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	" "	"	29.62	"	8.4	159
0705	Begin Discharge	#3 14°24.10' S 170°37.23' W	" "	40	"	" " X	8.2	090
20		#4 14°23.96' S 170°37.76' W		"			8.6	179
35	Remarks:	#5 14°24.39' S 170°36.75' W		"			8.4	008
50		#6 14°23.76' S 170°37.82' W		"			8.7	180
0805		#7 14°24.98' S 170°37.93' W		30			8.3	039
20		#8 14°23.17' S 170°37.32' W		"			8.9	272
35		#9 14°24.97' S 170°37.46' W		"			8.5	051
50		#10 14°23.55' S 170°36.98' W	East-18	"			9.1	358
0905		#11 14°24.67' S 170°37.83' W	" "	"	29.63		9.0	182
20		#12 14°24.08' S 170°37.04' W	" "	40	"		9.3	006
35		#13 14°23.97' S 170°37.97' W	East-20	"	"		8.7	167
50		#14 14°24.12' S 170°37.84' W	" "	"			9.2	003
1005		#15 14°2' S 170°3' W						
		#16 14°2' S 170°3' W						
		#17 14°2' S 170°3' W					15	
		#18 14°2' S 170°3' W						
		#19 14°2' S 170°3' W						
		#20 14°2' S 170°3' W						
		14°2' S 170°3' W					20	
		14°2' S 170°3' W						
0955	Finish Discharge	#15 14°23.32' S 170°37.74' W	East-20	40%	29.63	East-1.5	9.3	359
1000	Exit Discharge Zone	#16 14°22.60' S 170°37.97' W	" "	"	"	"	9.3	337
1055	Secure SK Dock	14°16.50' S 170°41.2' W						

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 170 mins. Average Speed During Discharge: 8.8 kts. Total Time Run 5-15 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 121 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Cook

N ▲

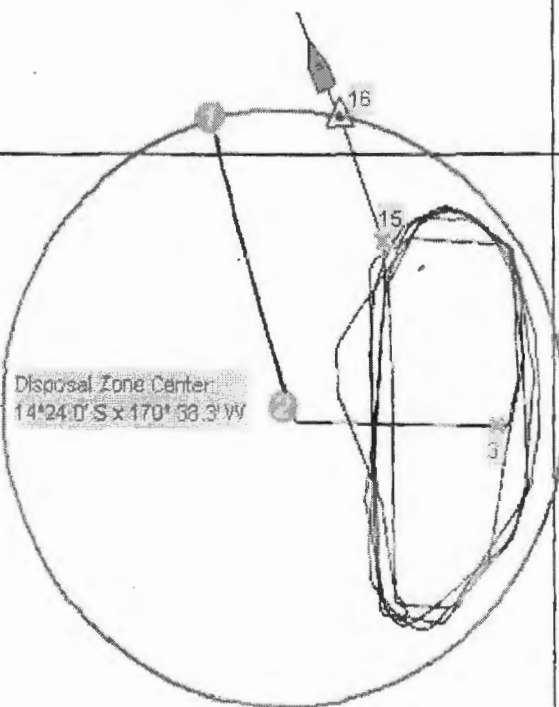
170 30.23 W

170 36.82 W

170 33.41 W

14 22.73 S

14 26.14 S



Disposal Zone Center
14°24.0' S x 170°33.3' W

31 July, 2011 - Sun.
Voyage # 5458
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Wind: East @ 15 - 20 kts.

OCEAN DUMPING MONTHLY SUMMARY

F/V BLUE MOON

August, 2011

NUMBER OF TRIPS:	Starkist	Other	Joint	TOTAL:
	10	0	0	10

GALLONS-FOR THE MONTH:	Starkist	Other	Joint	TOTAL:
	1,670,500	0	0	1,670,500

GALLONS FOR SOLO TRIPS:	Starkist	Other
	1,670,500	0

RUNNING TIME ON TRIPS: 53.3 hrs.

DISCHARGE TIME ON TRIPS: 28.33 hrs.

AV. GPM DISCHARGE RATE: 112.9 gal/min/kt

AV. TRIP TIME: 5.33 hrs.

AV. PERCENTAGE OF VESSEL USED BY EACH CANNERY - BY GALLONAGE:

Starkist	Other
100.00%	0.00%

MASTER :

M. Crook

Date: 08/03/11 Weds.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5459

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded: SK

Other

Total

153,250	Gallons
0	Gallons
153,250	Gallons

Trip # 1 - X

Trip # 2

8/2 1810	Begin 1 st Loading SK
2145	Finish 1 st Loading SK
8/3 0200	Begin 2 nd Loading SK
0430	Finish 2 nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course	
									Metric	kts	True*
0515	Depart Starkist		14°16.50' S	170°41.2' W	Calm	20	29.52				
0605	Arrive Edge of Zone	#1	14°22.55' S	170°38.68' W	"	10	"	East-1.0	8.9	163	
0613	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	East-3	"	"	"	8.6	161	
0620	Begin Discharge	#3	14°23.98' S	170°37.22' W	"	"	"	"	8.8	090	
" 35		#4	14°23.67' S	170°37.66' W	"	"	"	"	8.7	179	
" 50	Remarks:	#5	14°24.37' S	170°36.89' W	"	15	"	"	8.5	357	
0705		#6	14°23.39' S	170°37.71' W	"	"	29.63	"	8.6	183	
" 20		#7	14°24.66' S	170°36.93' W	East-5	"	"	"	8.8	358	
" 35		#8	14°23.52' S	170°37.55' W	"	"	"	"	8.7	216	
" 50		#9	14°24.85' S	170°37.08' W	"	20	"	"	8.7	022	
0805		#10	14°23.24' S	170°37.17' W	"	"	"	"	8.6	307	
" 20		#11	14°24.70' S	170°37.54' W	"	"	"	"	9.6	176	
" 35		#12	14°23.68' S	170°36.91' W	"	30	"	10	9.1	351	
" 50		#13	14°24.52' S	170°37.53' W	"	"	"	"	9.5	180	
0905		#14	14°23.60' S	170°36.93' W	"	"	"	"	8.9	334	
" 20		#15	14°2' S	170°3' W							
		#16	14°2' S	170°3' W							
		#17	14°2' S	170°3' W					15		
		#18	14°2' S	170°3' W							
		#19	14°2' S	170°3' W							
		#20	14°2' S	170°3' W							
			14°2' S	170°3' W							
			14°2' S	170°3' W					20		
			14°2' S	170°3' W							
0910	Finish Discharge	#15	14°22.99' S	170°37.21' W	East-5	30%	29.63	East-1.0	9.1	331	
0912	Exit Discharge Zone	#16	14°22.91' S	170°37.33' W	"	"	"	"	9.1	331	
1010	Secure SK Dock		14°16.50' S	170°41.2' W							

Current Direction: At Center WestEnd of Discharge West (slow)Discharge Pattern EllipseTotal Discharge Time: 170 mins. Average Speed During Discharge: 8.9 kts. Total Time Run 4.9 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 101.3 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Cook

Date: 08/05/11 Fri.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5460

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

176,250	Gallons
0	Gallons
176,250	Gallons

Trip # 1 - X

Trip # 2

2145	Begin 1 st Loading SK
1730	Finish 1 st Loading SK
0000	Begin 2 nd Loading SK
0200	Finish 2 nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course	
									Metric	kts	True*
0515	Depart Starkist		14°16.50' S	170°41.2' W	Calm	20	29.54				
0610	Arrive Edge of Zone	# 1	14°22.57' S	170°38.66' W	ENE-S		29.55	East-1.0	8.8	164	
0618	Arrive Zone Center	# 2	14°24.0' S	170°38.3' W	ENE-S		"		8.3	180	
0627	Begin Discharge	# 3	14°24.16' S	170°37.23' W	"		"		8.7	090	
" 42		# 4	14°23.52' S	170°37.70' W	"		"		8.2	181	
" 57	Remarks:	# 5	14°24.21' S	170°36.86' W	"		29.55		8.6	350	
0712		# 6	14°23.25' S	170°37.69' W	"		"		8.4	194	
" 27		# 7	14°24.80' S	170°36.88' W	ENE-10		"		8.2	013	
" 42		# 8	14°23.03' S	170°37.43' W	"		"		8.7	258	
" 57		# 9	14°23.97' S	170°37.79' W	"		"		8.9	181	
0812		# 10	14°23.34' S	170°37.07' W	"		"		8.7	309	
" 27		# 11	14°24.56' S	170°37.57' W	"		"		9.5	177	
" 42		# 12	14°23.34' S	170°37.00' W	ENE-12		29.57		9.0	341	
" 57		# 13	14°24.23' S	170°37.60' W	"		"		9.7	178	
0912		# 14	14°23.90' S	170°36.97' W	"		"		9.2	356	
" 27		# 15	14°2' S	170°3' W							
		# 16	14°2' S	170°3' W							
		# 17	14°2' S	170°3' W					15		
		# 18	14°2' S	170°3' W							
		# 19	14°2' S	170°3' W							
		# 20	14°2' S	170°3' W							
			14°2' S	170°3' W							
			14°2' S	170°3' W					20		
			14°2' S	170°3' W							
0918	Finish Discharge	# 15	14°23.00' S	170°37.38' W	ENE-12	20%	29.57	East-1.0	9.0	274	
0923	Exit Discharge Zone	# 16	14°22.66' S	170°37.70' W	"	"	"	"	8.8	323	
1015	Secure SK Dock		14°16.50' S	170°41.2' W							

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 171 mins. Average Speed During Discharge: 8.8 kts. Total Time Run 5.0 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 117 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Crooks

Date: 08/10/11 *Weeks*

F/V Blue Moon Ocean Dumping Log

Voyage #: 5461

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

186,750	Gallons
0	Gallons
186,750	Gallons

1635	Begin 1 st Loading SK
2145	Finish 1 st Loading SK
0230	Begin 2 nd Loading SK
0900	Finish 2 nd Loading SK

Trip # 1 - X

Trip # 2

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course	
									kts	True*	
0520	Depart Starkist		14°16.50' S	170°41.2' W	East-10	25	29.59				
0618	Arrive Edge of Zone	#1	14°22.63' S	170°38.65' W	East-12	"	"	East-1.5	8.4	162	
0627	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	"	"	"	"	8.1	157	
0636	Begin Discharge	#3	14°24.64' S	170°37.19' W	East-15	"	29.60	"	8.0	090	
51		#4	14°24.11' S	170°37.67' W	"	"	29.61	"	8.6	179	
0706	Remarks:	#5	14°24.87' S	170°37.13' W	"	"	"	"	8.1	021	
21		#6	14°22.98' S	170°37.64' W	"	"	"	"	8.1	240	
36		#7	14°24.81' S	170°37.69' W	"	"	"	"	8.4	181	
51		#8	14°23.15' S	170°37.14' W	"	"	"	"	8.6	352	
0806		#9	14°23.63' S	170°37.18' W	"	"	"	"	8.8	183	
21		#10	14°24.04' S	170°37.08' W	"	"	"	"	8.6	356	
36		#11	14°23.61' S	170°37.15' W	East-18	30	"	"	8.7	180	
51		#12	14°24.21' S	170°37.08' W	"	"	"	"	8.8	356	
0906		#13	14°23.00' S	170°37.75' W	East-20	"	"	"	9.0	209	
21		#14	14°24.86' S	170°37.78' W	"	"	"	"	8.7	172	
36		#15	14°2' S	170°3' W							
		#16	14°2' S	170°3' W							
		#17	14°2' S	170°3' W					15		
		#18	14°2' S	170°3' W							
		#19	14°2' S	170°3' W							
		#20	14°2' S	170°3' W							
			14°2' S	170°3' W							
			14°2' S	170°3' W					20		
			14°2' S	170°3' W							
0935	Finish Discharge	#15	14°23.24' S	170°37.84' W	East-20	30	29.61	East-1.5	9.3	001	
0939	Exit Discharge Zone	#16	14°22.66' S	170°37.82' W	"	"	"	"	9.2	338	
1030	Secure SK Dock		14°16.50' S	170°41.2' W							

Current Direction: At Center *West*End of Discharge *West*Discharge Pattern *Ellipse*Total Discharge Time: *179* mins. Average Speed During Discharge: *8.6* kts. Total Time Run *5.15* hr.Navigational Plot made: *yes* Presence of Plume? *No*Time and position of any floating material: *None*Discharge Rate: *121.3* Gallons/min/kt.Unusual Occurrences? *None*Notifications made: A.S.P.A. *✓* U.S.C.G.M.S.D. *✓*

Master: F/V Blue Moon

M. Paul

Date: 08/12/11 Fri.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5462

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

184,000

0

184,000

Gallons

Gallons

Gallons

Trip # 1 - X

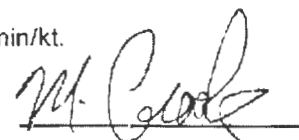
Trip # 2

8/11 1620 Begin 1st Loading SK
 2145 Finish 1st Loading SK
 8/12 0100 Begin 2nd Loading SK
 0245 Finish 2nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course	
								Metric	kts	True*	
0515	Depart Starkist		14°16.50' S	170°41.2' W	Calm	25	29.62				
0610	Arrive Edge of Zone	# 1	14°22.55' S	170°38.68' W	East-7	30	"	ESE-1.5	8.8	162	
0618	Arrive Zone Center	# 2	14°24.0' S	170°38.3' W	" "	"	"	" "	8.9	154	
0637	Begin Discharge	# 3	14°24.08' S	170°36.93' W	East-10	"	"	East-1.5 X	7.5	032	
" 52		# 4	14°23.63' S	170°37.73' W	" "	"	29.63		8.9	177	
0707	Remarks: Monitoring	# 5	14°24.39' S	170°36.53' W	" "	"	"		8.2	009	
" 22	Control Sample	# 6	14°23.25' S	170°37.77' W	" "	35	"		8.6	178	
" 37	drawn at 0625 hr	# 7	14°24.76' S	170°37.70' W	" "	30	"		9.0	141	
" 52	at position	# 8	14°23.24' S	170°37.12' W	" "	"	"		8.7	330	
0807	14°24.03' S x	# 9	14°23.43' S	170°37.82' W	" "	20	"		9.1	150	
" 22	170°37.20' W	# 10	14°24.12' S	170°36.93' W	" "	"	29.64		8.9	355	
" 37		# 11	14°23.19' S	170°37.84' W	" "	"	"		9.2	181	
" 52		# 12	14°24.52' S	170°37.00' W	East-12	"	"		9.1	003	
0907		# 13	14°23.13' S	170°37.28' W	" "	25	29.65		9.0	315	
" 22		# 14	14°2' S	170°3' W							
" 37		# 15	14°2' S	170°3' W							
		# 16	14°2' S	170°3' W							
		# 17	14°2' S	170°3' W					15		
		# 18	14°2' S	170°3' W							
		# 19	14°2' S	170°3' W							
		# 20	14°2' S	170°3' W							
			14°2' S	170°3' W							
			14°2' S	170°3' W					20		
			14°2' S	170°3' W							
0922	Finish Discharge	# 14	14°24.51' S	170°37.07' W	East-12	35%	29.65	East-1.5	9.4	042	
1038	Exit Discharge Zone	# 15	14°22.64' S	170°38.73' W	East-15	"	29.63	"	9.3	341	
1130	Secure SK Dock		14°16.50' S	170°41.2' W							

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 165 mins. Average Speed During Discharge: 8.8 kts. Total Time Run 6.25 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 126.7 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



Date: 08/16/11 Tues.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5463

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

110,500	Gallons
0	Gallons
110,500	Gallons

Trip # 1 - X

Trip # 2

1830	Begin 1 st Loading SK
1930	Finish 1 st Loading SK
0945	Begin 2 nd Loading SK
1245	Finish 2 nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
1300	Depart Starkist		14°16.50' S	170°41.2' W	East-7	30	29.58			
1353	Arrive Edge of Zone	#1	14°22.58' S	170°38.68' W	ENE-10	"	"	East-1.0	8.8	160
1405	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	NE-10	40	"		8.7	158
1413	Begin Discharge	#3	14°23.44' S	170°37.36' W	"	"	"	X	8.5	095
" 28		#4	14°23.35' S	170°37.89' W	"	"	29.57		8.6	135
" 43	Remarks.	#5	14°23.14' S	170°37.20' W	"	"	29.55		9.1	310
" 58		#6	14°23.48' S	170°37.82' W	"	"	29.53		8.7	138
1513		#7	14°23.39' S	170°37.06' W	}	30	"	5	9.3	320
" 28		#8	14°23.46' S	170°37.85' W		"	"		8.8	134
" 43		#9	14°23.60' S	170°37.05' W		"	27.52		9.4	341
" 58		#10	14°23.13' S	170°38.08' W		"	"		9.2	152
1613		#11	14°24.28' S	170°36.91' W		25	"		8.7	003
" 28		#12	14°23.09' S	170°38.18' W				10	9.0	140
" 43		#13	14°2' S	170°3' W						
" 58		#14	14°2' S	170°3' W						
1713		#15	14°2' S	170°3' W						
		#16	14°2' S	170°3' W						
		#17	14°2' S	170°3' W				15		
		#18	14°2' S	170°3' W						
		#19	14°2' S	170°3' W						
		#20	14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W				20		
			14°2' S	170°3' W						
1643	Finish Discharge	#13	14°22.78' S	170°38.23' W	NE-10	25%	29.52	East-1.0	9.5	321
1645	Exit Discharge Zone	#14	14°22.55' S	170°38.39' W					9.6	322
1735	Secure SK Dock		14°16.50' S	170°41.2' W						

Current Direction: At Center SouthwestEnd of Discharge SWDischarge Pattern EllipseTotal Discharge Time: 150 mins. Average Speed During Discharge: 9.0 kts. Total Time Run 4.6 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 82 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Carole

Date: 08/18/11 Thurs.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5464

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

184,500

0

184,500

Gallons

Gallons

Gallons

Trip # 1 - X

Trip # 2

8/17 1550 Begin 1st Loading SK
 2145 Finish 1st Loading SK
 8/18 0110 Begin 2nd Loading SK
 0225 Finish 2nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
0520	Depart Starkist		14°16.50' S	170°41.2' W	Calm	15	29.59			
0612	Arrive Edge of Zone	#1	14°22.0' S	170°38.0' W	NE-7	"	29.60	East/NE-1.0	8.9	163
0621	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	"	"	"	"	8.6	162
0630	Begin Discharge	#3	14°23.46' S	170°37.37' W	"	20	"	"	8.9	045
" 45		#4	14°23.44' S	170°37.88' W	"	"	"	"	8.9	140
0700	Remarks:	#5	14°23.77' S	170°36.86' W	"	"	"	"	8.8	336
" 15		#6	14°23.68' S	170°38.21' W	"	"	"	"	9.0	145
" 30		#7	14°24.52' S	170°37.15' W	"	"	"	"	8.7	099
" 45		#8	14°22.70' S	170°37.81' W	NE-10	"	"	"	8.9	281
0800		#9	14°24.00' S	170°37.64' W	"	"	"	"	9.2	138
" 15		#10	14°23.35' S	170°37.03' W	"	"	29.61	"	9.0	325
" 30		#11	14°23.21' S	170°38.17' W	"	25	"	"	9.3	142
" 45		#12	14°23.86' S	170°36.94' W	"	"	"	"	9.0	336
0900		#13	14°22.65' S	170°38.31' W	"	"	"	"	8.6	194
" 15		#14	14°2.0' S	170°3.0' W	"	"	"	"	"	"
" 30		#15	14°2.0' S	170°3.0' W	"	"	"	"	"	"
		#16	14°2.0' S	170°3.0' W	"	"	"	"	"	"
		#17	14°2.0' S	170°3.0' W	"	"	"	"	15	"
		#18	14°2.0' S	170°3.0' W	"	"	"	"	"	"
		#19	14°2.0' S	170°3.0' W	"	"	"	"	"	"
		#20	14°2.0' S	170°3.0' W	"	"	"	"	"	"
			14°2.0' S	170°3.0' W	"	"	"	"	20	"
			14°2.0' S	170°3.0' W	"	"	"	"	"	"
0915	Finish Discharge	#14	14°22.88' S	170°38.21' W	NE-10	25%	29.61	East/NE-1.0	9.3	328
0918	Exit Discharge Zone	#15	14°22.59' S	170°38.36' W	"	"	"	"	9.3	331
1010	Secure SK Dock		14°16.50' S	170°41.2' W	"	"	"	"	"	"

Current Direction: At Center South west

End of Discharge SW

Discharge Pattern Ellipse

Total Discharge Time: 165 mins. Average Speed During Discharge: 8.9 kts. Total Time Run 4.85 hr.

Navigational Plot made: Yes Presence of Plume? No

Time and position of any floating material: None

Discharge Rate: 125.6 Gallons/min/kt.

Unusual Occurrences? None

Notifications made: A.S.P.A. U.S.C.G.M.S.D.

Master: F/V Blue Moon

M. Cook

Date: 08/24/11 Weds.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5466

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

160,750	Gallons
0	Gallons
160,750	Gallons

Trip # 1 - X

Trip # 2

1700	Begin 1 st Loading SK
2145	Finish 1 st Loading SK
0130	Begin 2 nd Loading SK
0730	Finish 2 nd Loading SK

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
						Metric	kts	True*
0530	Depart Starkist	14°16.50' S 170°41.2' W	SE-25	90	29.70			
0632	Arrive Edge of Zone	#1 14°22.55' S 170°38.70' W	" "	80	29.72	SE: 3-3.5	7.5	162
0643	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	" "	"	"	"	7.3	168
0653	Begin Discharge	#3 14°24.36' S 170°37.25' W	" "	"	"	" X	7.0	165
0708		#4 14°24.85' S 170°37.99' W	" "	"	"	"	6.8	103
" 23	Remarks:	#5 14°24.24' S 170°38.08' W	" "	"	"	"	9.1	302
" 38		#6 14°24.36' S 170°37.18' W	" "	"	"	"	8.7	245
" 53		#7 14°25.01' S 170°37.96' W	" "	70	29.73	" 5	7.2	41
0808		#8 14°24.23' S 170°38.09' W	" "	"	"	"	9.3	314
" 23		#9 14°24.39' S 170°36.78' W	SE-30	"	"	"	8.7	251
" 38		#10 14°25.02' S 170°38.06' W	" "	"	"	"	7.1	161
" 53		#11 14°23.91' S 170°38.67' W	" "	60	"	"	9.2	317
0908		#12 14°24.44' S 170°37.25' W	" "	"	"	" 10	8.9	252
" 23		#13 14°25.10' S 170°37.78' W	" "	"	"	"	8.6	116
" 38		#14 14°2' S 170°3' W	" "	"	"	"		
" 53		#15 14°2' S 170°3' W	" "	"	"	"		
		#16 14°2' S 170°3' W	" "	"	"	"		
		#17 14°2' S 170°3' W	" "	"	"	" 15		
		#18 14°2' S 170°3' W	" "	"	"	"		
		#19 14°2' S 170°3' W	" "	"	"	"		
		#20 14°2' S 170°3' W	" "	"	"	"		
		14°2' S 170°3' W	" "	"	"	" 20		
		14°2' S 170°3' W	" "	"	"	"		
0938	Finish Discharge	#14 14°23.87' S 170°38.19' W	SE-30	60%	29.73	SE: 3-3.5	9.3	334
0945	Exit Discharge Zone	#15 14°22.65' S 170°38.63' W	" "	"	"	"	9.6	337
1215	Secure SK Dock	14°16.50' S 170°41.2' W	" "	"	"	"		

Current Direction: At Center NW

End of Discharge Northwest

Discharge Pattern Figure 8

Total Discharge Time: 165 mins. Average Speed During Discharge: 8.3 kts. Total Time Run 6.75 hr.

Navigational Plot made: Yes Presence of Plume? No

Time and position of any floating material: None

Discharge Rate: 117.4 Gallons/min/kt.

Unusual Occurrences? None (Figure 8' pattern due to Rough Seas.) Also, Fueling

Notifications made: A.S.P.A. U.S.C.G.M.S.D.

Master: F/V Blue Moon

M. Cook

Date: 08/20/11 Sat.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5465

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

158,250	Gallons
0	Gallons
158,250	Gallons

Trip # 1 - X

Trip # 2

1535	Begin 1 st Loading SK
2140	Finish 1 st Loading SK
	Begin 2 nd Loading SK
	Finish 2 nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
									kts	True*
0525	Depart Starkist		14°16.50' S	170°41.2' W	Calm	50	29.62	Metric		
0616	Arrive Edge of Zone	#1	14°22.57' S	170°38.66' W	East-7	"	29.63	SE-SW-1.5	8.6	163
0627	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	East-10	"	29.64	"	8.5	161
0635	Begin Discharge	#3	14°24.05' S	170°37.23' W	"	40	"	"	8.7	090
" 50		#4	14°23.77' S	170°37.80' W	"	"	29.65	SE-SW-1.5	8.5	178
0705	Remarks:	#5	14°24.82' S	170°37.12' W	"	"	"	"	8.5	023
20		#6	14°24.73' S	170°37.55' W	"	50	29.66	"	8.4	236
35		#7	14°24.78' S	170°37.80' W	"	"	"	5	8.7	174
50		#8	14°24.51' S	170°37.01' W	"	60	"	"	8.7	338
0805		#9	14°23.48' S	170°37.82' W	"	"	"	"	8.8	180
20		#10	14°24.55' S	170°37.01' W	"	"	"	"	8.7	002
35		#11	14°23.64' S	170°37.86' W	"	"	29.67	"	8.4	188
50		#12	14°24.95' S	170°37.31' W	"	"	"	10	8.9	032
0905		#13	14°23.18' S	170°37.80' W	"	70	"	"	8.7	205
20		#14	14°24.37' S	170°37.31' W	"	"	29.68	"	8.9	019
35		#15	14°2' S	170°3' W						
		#16	14°2' S	170°3' W						
		#17	14°2' S	170°3' W					15	
		#18	14°2' S	170°3' W						
		#19	14°2' S	170°3' W						
		#20	14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W					20	
			14°2' S	170°3' W						
0930	Finish Discharge	#15	14°23.03' S	170°37.63' W	East-10	70%	29.68	SE-SW-1.5	9.1	340
0935	Exit Discharge Zone	#16	14°22.62' S	170°37.81' W	"	"	"	"	9.3	336
1030	Secure SK Dock		14°16.50' S	170°41.2' W						

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 175 mins. Average Speed During Discharge: 8.7 kts. Total Time Run 5.1 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 104 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



Date: 08/26/11 Fri.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5467

Time

Permit # OD 93-01 & OD 93-02

8/26 1715 Begin 1st Loading SK
 2145 Finish 1st Loading SK
 8/26 0100 Begin 2nd Loading SK
 0400 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

Volume Loaded:

SK

Other

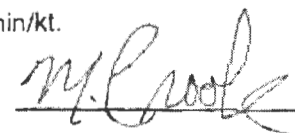
Total

187,500 Gallons
 0 Gallons
 187,500 Gallons

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0625	Depart Starkist	14°16.50' S 170°41.2' W	SE-20	90	29.66	Metric	8.0	166
0723	Arrive Edge of Zone #1	14°22.57' S 170°38.58' W	SE-25	"	29.68	SE-3.0	8.0	152
0735	Arrive Zone Center #2	14°24.0' S 170°38.3' W	" "	"	29.69	" "	7.7	152
0745	Begin Discharge #3	14°24.40' S 170°37.21' W	" "	"	"	" " X	7.5	115
0800	#4	14°24.21' S 170°37.63' W	" "	85	"	SE-3.5+	7.2	094
" 15	Remarks: #5	14°24.13' S 170°38.21' W	" "	"	"	" "	8.6	318
" 30	#6	14°24.11' S 170°37.75' W	" "	"	"	" "	8.7	263
" 45	#7	14°25.16' S 170°37.59' W	" "	"	"	" " 5	7.3	115
0900	#8	14°24.10' S 170°37.78' W	SE-28	"	"	" "	7.5	101
" 15	#9	14°24.63' S 170°37.88' W	" "	90%	"	" "	9.2	257
" 30	#10	14°24.61' S 170°37.69' W	" "	100	"	" "	9.0	310
" 45	#11	14°24.55' S 170°37.19' W	" "	"	29.70	" "	9.0	295
1000	#12	14°24.89' S 170°37.53' W	SE-30	"	"	" " 10	8.9	321
" 15	#13	14°24.33' S 170°37.27' W	" "	100-RAIN	"	" "	8.0	115
" 30	#14	14°25.00' S 170°38.62' W	" "	100	29.69	" "	8.2	112
" 45	#15	14°2' S 170°3' W						
	#16	14°2' S 170°3' W						
	#17	14°2' S 170°3' W					15	
	#18	14°2' S 170°3' W						
	#19	14°2' S 170°3' W						
	#20	14°2' S 170°3' W						
		14°2' S 170°3' W						
		14°2' S 170°3' W					20	
		14°2' S 170°3' W						
1045	Finish Discharge #15	14°24.00' S 170°38.15' W	SE-30	100%	29.69	SE-3.5	9.3	337
1053	Exit Discharge Zone #16	14°22.64' S 170°38.54' W	" "	"	"	"	9.4	337
1145	Secure SK Dock	14°16.50' S 170°41.2' W						

Current Direction: At Center NWEnd of Discharge NWDischarge Pattern FIGURE 8Total Discharge Time: 180 mins. Average Speed During Discharge: 8.34 kts. Total Time Run 5.33 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 125 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon



Date: 08/30/11 Tues.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5468

Time

Permit # OD 93-01 & OD 93-02

8/27 1600 Begin 1st Loading SK
 2145 Finish 1st Loading SK
 8/30 0000 Begin 2nd Loading SK
 0200 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

Volume Loaded:

SK

Other

Total

168,750 Gallons
 0 Gallons
 168,750 Gallons

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0535	Depart Starkist	14°16.50' S 170°41.2' W	SE-12	100	29.59	Metric	kts	True*
0633	Arrive Edge of Zone #1	14°22.58' S 170°38.67' W	SE-18	"	"	SE-3.0+	7.7	162
0645	Arrive Zone Center #2	14°24.0' S 170°38.3' W	"	"	"	"	7.9	160
0655	Begin Discharge #3	14°24.46' S 170°37.31' W	"	"	"	"	7.7	115
0710	#4	14°25.07' S 170°38.04' W	"	"	"	"	7.5	113
25	Remarks: #5	14°24.30' S 170°38.27' W	"	"	29.60	"	8.6	347
40	#6	14°24.66' S 170°37.63' W	SE-15	95	"	"	9.2	252
55	#7	14°25.09' S 170°37.76' W	"	"	"	5	8.5	338
0810	#8	14°24.28' S 170°37.73' W	SE-18	90	"	"	7.9	100
25	#9	14°24.69' S 170°37.96' W	"	"	29.61	"	9.3	249
40	#10	14°25.11' S 170°37.55' W	SE-20	80	"	"	9.0	315
55	#11	14°24.17' S 170°37.43' W	"	"	"	"	9.3	248
0910	#12	14°24.88' S 170°38.50' W	"	70	"	10	8.0	094
25	#13	14°24.43' S 170°38.11' W	SE-22	"	"	"	9.1	328
40	#14	14°24.62' S 170°37.50' W	"	60	"	"	9.2	252
55	#15	14°2' S 170°3' W	"	"	"	"	"	"
	#16	14°2' S 170°3' W	"	"	"	"	"	"
	#17	14°2' S 170°3' W	"	"	"	15	"	"
	#18	14°2' S 170°3' W	"	"	"	"	"	"
	#19	14°2' S 170°3' W	"	"	"	"	"	"
	#20	14°2' S 170°3' W	"	"	"	"	"	"
		14°2' S 170°3' W	"	"	"	"	"	"
		14°2' S 170°3' W	"	"	"	20	"	"
		14°2' S 170°3' W	"	"	"	"	"	"
0955	Finish Discharge #15	14°24.50' S 170°37.88' W	SE-22	50%	29.61	SE-3+	9.0	338
1010	Exit Discharge Zone #16	14°22.55' S 170°38.44' W	"	"	"	"	9.1	336
1105	Secure SK Dock	14°16.50' S 170°41.2' W	"	"	"	"	"	"

Current Direction: At Center NWEnd of Discharge NWDischarge Pattern Figure 8Total Discharge Time: 80 mins. Average Speed During Discharge: 8.6 kts. Total Time Run 5.5 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: None Discharge Rate: 109 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Cook

N ▲

170 40.23 W

170 36.82 W

170 33.41 W

14 22.73 S

Disposal Zone Center:
14°24.0' S x 170° 38.3' W

14 26.14 S

03 August, 2011 - Weds.
Voyage # 5459
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

←
Wind: Calm to East @ 5 kts.

N ▲

170 40.23 W

170 36.82 W

170 33.41 W

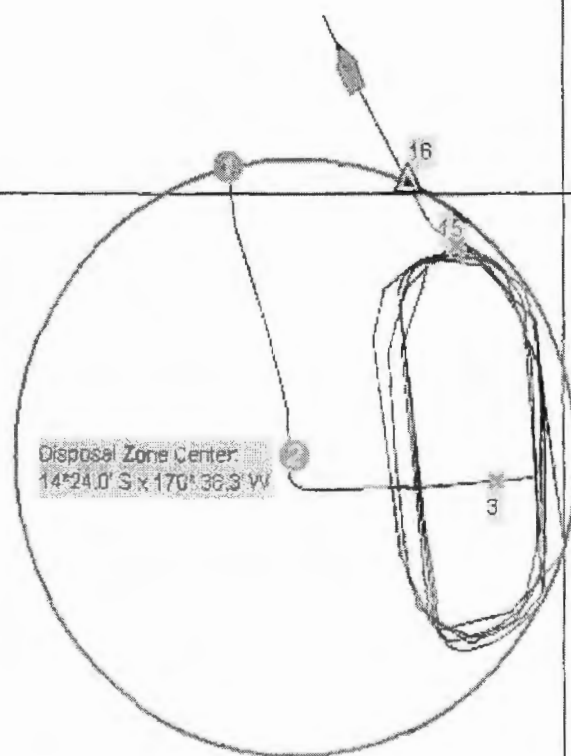
422.73 S

426.14 S

05 August, 2014 - Fri.
Voyage # 5460
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Wind: ENE @ 5-12 Kts.

NA

170 40.23 W

170 36.82 W

170 33.41 W

10 August, 2011 - Weds.
Voyage # 5451
Starkist Cargo, Trip #1

M. Crook

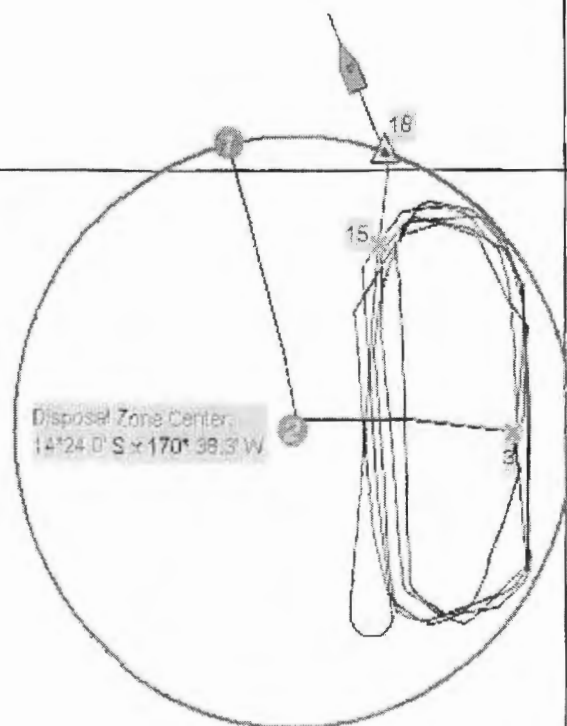
M. Crook, Master
F/V Blue Moon

422.73 S

Disposal Zone Center:
14°24.0' S ~ 170° 39.3' W

Wind: East @ 10 - 20 kts.

426.14 S



N ▲

70 39.90 W

70 37.00 W

70 34.10 W

421.30 S

12 August, 2011 - Fri.
Voyage # 5482
Starkist Cargo, Trip #1
*Ocean Monitoring Conducted
Waypoint 'C' indicates Control Station sampling position

M. Crook

M. Crook, Master
FV Blue Moon

15

Disposal Zone Center:
14°24'0" S x 170°39.3' W

Wind East @ 7 - 15 kts.

424.20 S

14

N ▲

170 39.90 W

170 37.00 W

170 34.10 W

421.30 S

16 August, 2011 - Tues.

Voyage # 5463

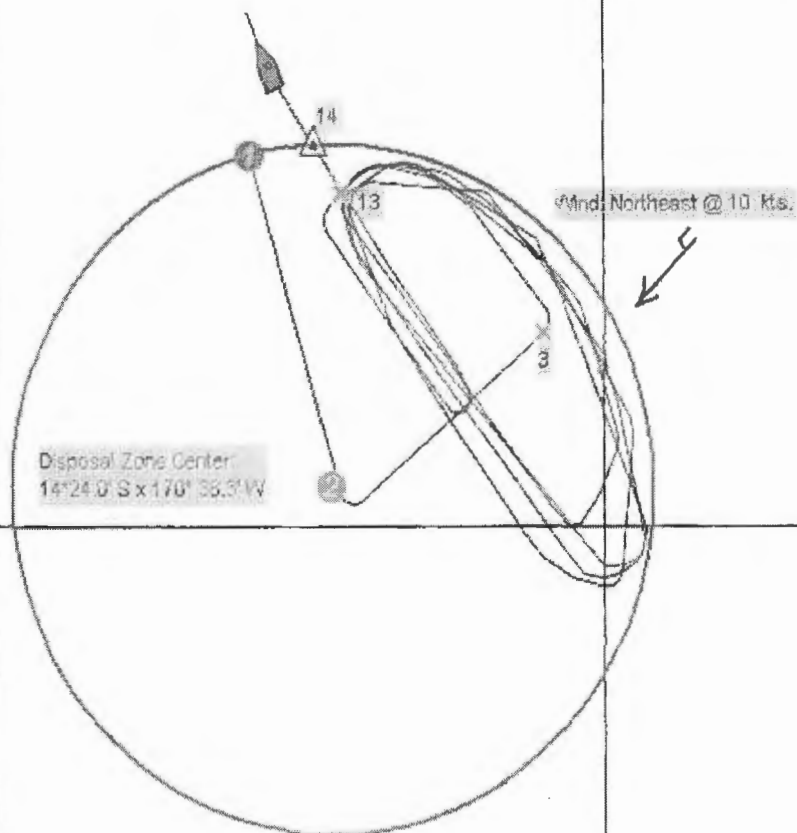
Storkist Cargo, Trip #1

M. Crook

M. Crook, Master

F/V Blue Moon

424.20 S



Wind: Northeast @ 10 Kts.

Disposal Zone Center:
14°24.0' S x 170° 36.3' W

N ▲

170 39.90 W

170 37.00 W

170 34.10 W

121.30 S

18 August, 2011 - Thurs.
Voyage # 5484
Starkist Cargo, Trip #1

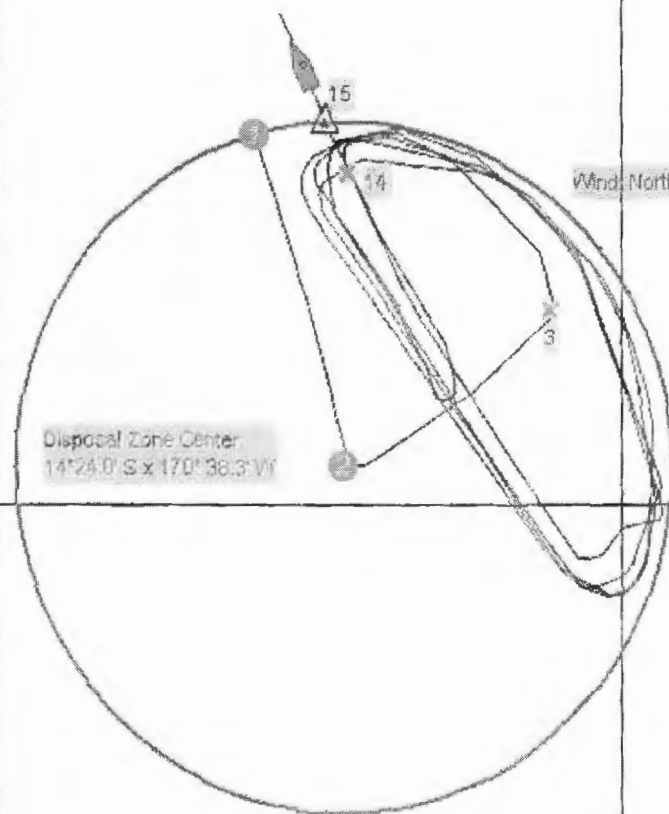
M. Crook

M. Crook, Master
FM Blue Moon

Wind: Northeast @ 7 - 10 kts.

Disposal Zone Center:
14°24.0' S x 170°38.3' W

124.20 S



N ▲

170 41.56 W

170 38.40 W

170 35.24 W

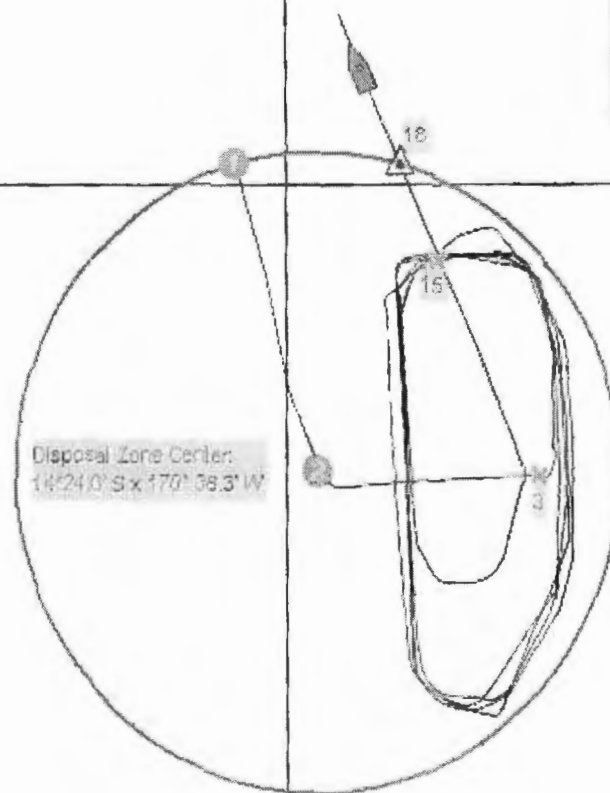
14 22.68 S

14 25.84 S

20 August, 2011 - Sol.
Voyage # 5465
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Disposal Zone Center:
14°24.0' S x 170°38.3' W



Wind: East @ 7-10 kts.

N ▲

70 40.23 W

70 36.82 W

70 33.41 W

22.73 S

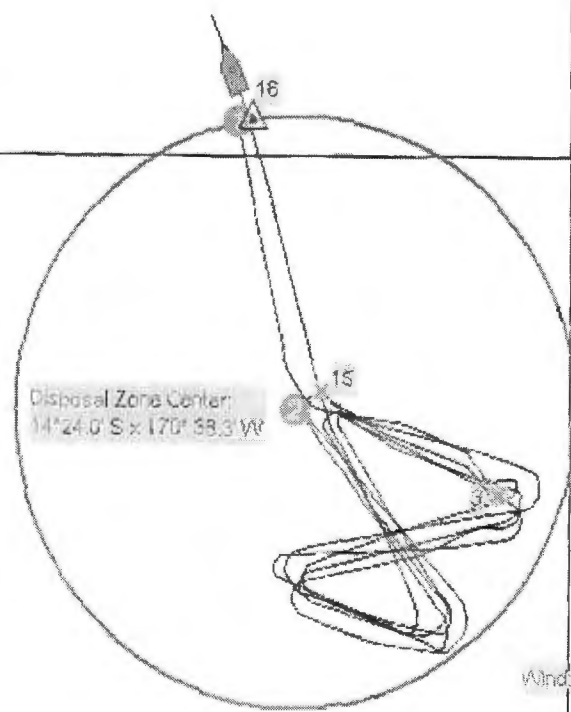
Disposal Zone Center:
14°24.0' S x 170°38.3' W

26.14 S

26 August, 2011 - Fri.
Voyage # 5467
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Wind Southeast @ 25-30 kts



NA
14 20.93 S

170 41.98 W

170 38.55 W

170 35.42 W

30 August, 2011 - Tues.
Voyage # 5468
Starlist Cargo, Trip #1

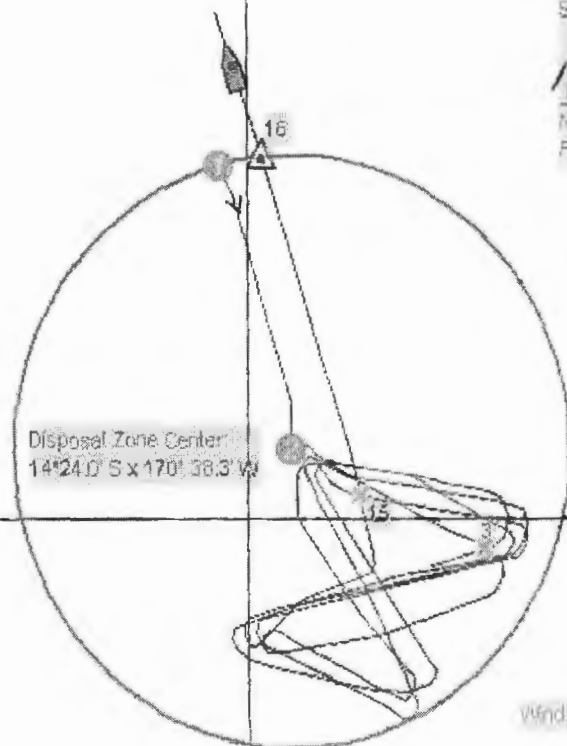
M. Crook

M. Crook, Master
FN Blue Moon

14 24.36 S

Disposal Zone Center:
14°24.0' S x 170°38.3' W

Wind: Southeast @ 15-22 kts



OCEAN DUMPING MONTHLY SUMMARY

F/V BLUE MOON

September, 2011

NUMBER OF TRIPS:	Starkist	Other	Joint	TOTAL:
	13	0	0	13

GALLONS-FOR THE MONTH:	Starkist	Other	Joint	TOTAL:
	2,249,750	0	0	2,249,750

GALLONS FOR SOLO TRIPS:	Starkist	Other
	2,249,750	0

RUNNING TIME ON TRIPS: 69.7 hours

DISCHARGE TIME ON TRIPS: 39.83 hrs.

AV. GPM DISCHARGE RATE: 109.6 gal/min/kt

AV. TRIP TIME: 5.36 hrs.

AV. PERCENTAGE OF VESSEL USED BY EACH CANNERY - BY GALLONAGE:

Starkist	Other
100.00%	0.00%

MASTER :

M. Crook



Date: 09/01/11 Thurs.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5469

Time M.C.

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

189,500

Gallons

0

Gallons

189,500

Gallons

Trip # 1 - X

Trip # 2

7/31 1220 1615 Begin 1st Loading SK
2150 Finish 1st Loading SK
0020 Begin 2nd Loading SK
0157 0300 Finish 2nd Loading SK

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
0520	Depart Starkist		14°16.50' S	170°41.2' W	East-7	25	29.65			
0612	Arrive Edge of Zone	#1	14°22.51' S	170°38.64' W	NE-10	30	29.66	East-1.5	8.6	165
0622	Arrive Zone Center	#2	14°24.0' S	170°38.3' W	" "	40	"	" "	8.8	164
0645	Begin Discharge	#3	14°23.56' S	170°37.38' W	" "	"	29.67	" " X	7.6	059
0700		#4	14°23.31' S	170°37.77' W	" "	"	29.68	" "	7.8	135
" 15	Remarks: Ocean	#5	14°23.73' S	170°36.72' W	NE-12	"	"	" "	8.4	326
" 30	Monitoring	#6	14°23.38' S	170°37.87' W	" "	"	"	" "	8.3	136
" 45	Control Samples	#7	14°23.77' S	170°36.87' W	" "	30	"	" "	8.5	334
0800	discharge of 0635 hrs	#8	14°23.28' S	170°37.94' W	" "	"	"	" "	8.6	190
" 15	14°23.43' S X	#9	14°23.90' S	170°36.88' W	" "	"	"	" "	8.8	335
" 30	170°37.40' W	#10	14°23.20' S	170°38.02' W	" "	"	"	" "	8.6	136
" 45		#11	14°24.22' S	170°36.92' W	NE-15	"	"	" "	8.9	337
0900		#12	14°23.07' S	170°38.14' W	" "	50	"	" "	8.7	130
" 15		#13	14°23.96' S	170°36.85' W	" "	"	"	" "	9.0	316
" 30		#14	14°22.95' S	170°38.27' W	" "	60	"	" "	8.8	142
" 45		#15	14°23.76' S	170°36.92' W	" "	"	29.69	" "	8.8	351
1000		#16	14°2	170°3	W					
		#17	14°2	170°3	W				15	
		#18	14°2	170°3	W					
		#19	14°2	170°3	W					
		#20	14°2	170°3	W					
			14°2	170°3	W					
			14°2	170°3	W				20	
			14°2	170°3	W					
1000	Finish Discharge	#16	14°22.91' S	170°37.47' W	NE-15	60%	29.69	East-1.5	8.6	131
1110	Exit Discharge Zone	#17	14°22.70' S	170°38.87' W	" "	"	"	" "	9.2	337
1200	Secure SK Dock		14°16.50' S	170°41.2' W						

Current Direction: At Center Southwest End of Discharge SW Discharge Pattern EllipseTotal Discharge Time: 195 mins. Average Speed During Discharge: 8.55 kts. Total Time Run 6.6 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: None Discharge Rate: 113.7 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ☒ U.S.C.G.M.S.D. ☒

Master: F/V Blue Moon

M. Cook

Date: 09/03/11 Sat.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5470

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

185,000

0

185,000

Gallons

Gallons

Gallons

Trip # 1 - X

Trip # 2

112
9/3

1830	Begin 1 st Loading SK
2140	Finish 1 st Loading SK
0200	Begin 2 nd Loading SK
0330	Finish 2 nd Loading SK

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0520	Depart Starkist	14°16.50' S 170°41.2' W	East-5	40	29.63	Metric	kts	True*
0613	Arrive Edge of Zone	#1 14°22.55' S 170°38.64' W	East-10	"	"	East-1.0	8.6	164
0622	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	"	"	"	"	8.3	166
0630	Begin Discharge	#3 14°24.07' S 170°37.21' W	"	"	29.64	" X	8.1	090
45		#4 14°23.58' S 170°37.77' W	"	"	"	"	8.6	177
0700	Remarks:	#5 14°24.59' S 170°37.13' W	"	"	"	"	8.4	006
15		#6 14°23.06' S 170°37.34' W	"	"	29.65	"	8.7	358
30		#7 14°24.51' S 170°37.80' W	"	"	"	"	8.9	169
45		#8 14°23.72' S 170°36.98' W	"	"	"	"	8.8	002
0800		#9 14°23.80' S 170°37.76' W	"	50	"	"	9.2	180
15		#10 14°24.78' S 170°37.12' W	East-12	"	"	"	8.7	017
30		#11 14°23.03' S 170°37.79' W	"	"	"	"	8.5	188
45		#12 14°25.12' S 170°37.35' W	"	"	"	"	8.8	013
0900		#13 14°23.56' S 170°37.06' W	"	"	"	"	9.1	357
15		#14 14°24.46' S 170°37.65' W	"	"	"	"	9.6	179
30		#15 14°23.74' S 170°37.04' W	East-10	"	"	"	8.9	351
45		#16 14°23.89' S 170°37.82' W	"	"	29.66	"	8.8	176
1000		#17 14°24.35' S 170°36.91' W	"	40	"	"	8.8	005
1015		#18 14°23.48' S 170°37.99' W	"	30	"	"	9.5	192
1030		#19 14°24.16' S 170°36.95' W	"	"	29.65	"	8.7	004
		#20 14°2' S 170°3' W						
		14°2' S 170°3' W						
		14°2' S 170°3' W					20	
		14°2' S 170°3' W						
1045	Finish Discharge	#20 14°23.58' S 170°36.97' W	East-10	30%	29.65	East-1.0	9.1	358
1048	Exit Discharge Zone	#21 14°23.22' S 170°37.00' W	"	"	"	"	9.3	358
1150	Secure SK Dock	14°16.50' S 170°41.2' W						

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 255 mins. Average Speed During Discharge: 8.8 kts. Total Time Run 6.5 hr.Navigational Plot made: yes Presence of Plume? NOTime and position of any floating material: NoneDischarge Rate: 82.4 Gallons/min/kt.Unusual Occurrences? Cleaning/BACK Flushing Storage #1 Tanks.Notifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Cook

Date: 09/07/11 Weds.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5471

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

122,500	Gallons
0	Gallons
122,500	Gallons

Trip # 1 - X

Trip # 2

1830	Begin 1 st Loading SK
2145	Finish 1 st Loading SK
0200	Begin 2 nd Loading SK
0415	Finish 2 nd Loading SK

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0525	Depart Starkist	14°16.50' S 170°41.2' W	East-10	60	29.62	Metric	kts	True*
0618	Arrive Edge of Zone #1	14°22.58' S 170°38.68' W	" "	"	29.63	St. E-2.5	8.5	161
0628	Arrive Zone Center #2	14°24.0 S 170°38.3 W	" "	65	29.64	" "	8.3	164
0638	Begin Discharge #3	14°24.05 S 170°37.21 W	" "	70	29.65	" " X	8.1	090
53	#4	14°23.55 S 170°37.89 W	" "	"	"	" "	8.5	177
0708	Remarks: #5	14°24.84 S 170°37.18 W	" "	60	"	" "	8.2	014
23	#6	14°23.34 S 170°37.07 W	" "	"	29.66	" "	8.6	321
38	#7	14°24.59 S 170°37.76 W	" "	"	"	" "	8.6	180
53	#8	14°23.91 S 170°36.91 W	" "	"	"	" "	8.8	338
0808	#9	14°22.90 S 170°37.76 W	" "	"	29.67	" "	8.2	186
" 23	#10	14°24.86 S 170°37.19 W	" "	50	29.68	" "	8.5	029
" 38	#11	14°23.04 S 170°37.22 W	East-12	40	"	St. East-2.0	9.1	305
" 53	#12	14°24.82 S 170°37.21 W	" "	"	"	" " 10	8.4	041
0908	#13	14°23.47 S 170°37.06 W	" "	50	"	" "	9.1	342
" 23	#14	14°2 S 170°3 W	" "	"	"	" "	"	"
" 38	#15	14°2 S 170°3 W	" "	"	"	" "	"	"
	#16	14°2 S 170°3 W	" "	"	"	" "	"	"
	#17	14°2 S 170°3 W	" "	"	"	" "	15	"
	#18	14°2 S 170°3 W	" "	"	"	" "	"	"
	#19	14°2 S 170°3 W	" "	"	"	" "	"	"
	#20	14°2 S 170°3 W	" "	"	"	" "	"	"
		14°2 S 170°3 W	" "	"	"	" "	20	"
		14°2 S 170°3 W	" "	"	"	" "	"	"
0915	Finish Discharge #14	14°23.10 S 170°37.75 W	East-12	50%	29.68	St. East-2.0	8.6	273
0920	Exit Discharge Zone #15	14°22.56 S 170°38.26 W	" "	60%	"	" "	9.3	338
1015	Secure SK Dock	14°16.50 S 170°41.2 W	" "	"	"	" "	"	"

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 157 mins. Average Speed During Discharge: 8.56 kts. Total Time Run 4.8 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: None Discharge Rate: 91 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Crank

Date: 09/09/11 Fri.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5472

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

191,750	Gallons
0	Gallons
191,750	Gallons

1425	Begin 1 st Loading SK
2145	Finish 1 st Loading SK
0130	Begin 2 nd Loading SK
0300	Finish 2 nd Loading SK

Trip # 1 - X

Trip # 2

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0525	Depart Starkist	14°16.50' S 170°41.2' W	Calms	25	29.64	Metric	kts	True*
0617	Arrive Edge of Zone	#1 14°22.51' S 170°38.64' W	East-10	35	29.66	E+S-1.5	8.5	164
0628	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	" "	30	"	" "	8.2	166
0637	Begin Discharge	#3 14°24.07' S 170°37.22' W	" "	25	"	" " X	8.2	090
" 52		#4 14°23.72' S 170°37.64' W	" "	"	"	" "	8.5	178
0707	Remarks:	#5 14°24.60' S 170°37.00' W	" "	30	29.67	" "	8.1	012
" 22		#6 14°23.13' S 170°37.71' W	" "	"	"	" "	8.6	180
" 37		#7 14°24.95' S 170°37.70' W	" "	"	"	" "	8.8	197
" 52		#8 14°23.52' S 170°36.96' W	" "	"	29.68	" "	8.5	323
0807		#9 14°23.83' S 170°37.78' W	East-12	"	"	" "	9.0	181
" 22		#10 14°24.74' S 170°37.14' W	" "	"	"	" "	8.4	032
" 37		#11 14°22.98' S 170°37.44' W	" "	"	"	" "	8.8	274
" 52		#12 14°24.74' S 170°37.78' W	" "	20	29.69	" "	9.2	181
0907		#13 14°23.71' S 170°36.97' W	" "	"	"	" "	8.8	346
" 22		#14 14°24.01' S 170°37.68' W	" "	15	"	" "	9.4	179
" 37		#15 14°2' S 170°3' W	" "	"	"	" "	"	"
		#16 14°2' S 170°3' W	" "	"	"	" "	"	"
		#17 14°2' S 170°3' W	" "	"	"	" "	15	"
		#18 14°2' S 170°3' W	" "	"	"	" "	"	"
		#19 14°2' S 170°3' W	" "	"	"	" "	"	"
		#20 14°2' S 170°3' W	" "	"	"	" "	"	"
		14°2' S 170°3' W	" "	"	"	" "	"	"
		14°2' S 170°3' W	" "	"	"	" "	20	"
		14°2' S 170°3' W	" "	"	"	" "	"	"
0937	Finish Discharge	#15 14°23.81' S 170°37.20' W	East-12	10%	29.69	E+S-1.5	9.1	345
0946	Exit Discharge Zone	#16 14°22.76' S 170°37.46' W	" "	"	"	" "	9.3	330
1035	Secure SK Dock	14°16.50' S 170°41.2' W	" "	"	"	" "	"	"

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 180 mins. Average Speed During Discharge: 8.7 kts. Total Time Run 5.2 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 122 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Crook

Date: 09/11/11 Sun.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5473

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

181,750

Gallons

0

Gallons

181,750

Gallons

7/10 1600 Begin 1st Loading SK
 2145 Finish 1st Loading SK
 0200 Begin 2nd Loading SK
 0400 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0520	Depart Starkist	14*16.50' S 170*41.2' W	East-10	30	29.60	Metric	kts	True*
0613	Arrive Edge of Zone	# 1 14*22.54' S 170*38.65' W	East-12	"	29.62	East-1.5	8.6	162
0623	Arrive Zone Center	# 2 14*24.0 S 170*38.3 W	"	"	"	"	8.4	160
0632	Begin Discharge	# 3 14*24.13' S 170*37.21' W	"	"	29.63	X	8.3	090
0647		# 4 14*23.62' S 170*37.79' W		40			8.7	178
0702	Remarks:	# 5 14*24.72' S 170*37.10' W					8.2	019
" 17		# 6 14*23.21' S 170*37.07' W		60			8.8	356
" 32		# 7 14*24.48' S 170*37.83' W		70			8.7	175
" 47		# 8 14*24.23' S 170*37.04' W		80			8.4	000
0802		# 9 14*23.16' S 170*37.76' W		"			8.8	180
" 17		# 10 14*24.65' S 170*37.24' W		Rain			8.6	011
" 32		# 11 14*23.49' S 170*37.03' W	East-15	80	29.64		8.9	358
" 47		# 12 14*24.74' S 170*37.86' W	"	"	"		9.2	174
0902		# 13 14*23.73' S 170*36.98' W	"	70	"		9.0	003
" 17		# 14 14*23.38' S 170*37.83' W	"	"	"		9.1	181
" 32		# 15 14*24.87' S 170*37.32' W	"	80	"		8.5	036
		# 16 14*2 S 170*3 W						
		# 17 14*2 S 170*3 W					15	
		# 18 14*2 S 170*3 W						
		# 19 14*2 S 170*3 W						
		# 20 14*2 S 170*3 W						
		14*2 S 170*3 W						
		14*2 S 170*3 W					20	
		14*2 S 170*3 W						
0947	Finish Discharge	# 16 14*23.04' S 170*37.23' W	East-15	80%	29.65	East-1.5	9.1	334
0949	Exit Discharge Zone	# 17 14*22.85' S 170*37.32' W	"	"	"	"	9.2	336
1045	Secure SK Dock	14*16.50' S 170*41.2' W						

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 195 mins. Average Speed During Discharge: 8.7 kts. Total Time Run 5.4 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 107 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Crook

Date: 09/13/11 Tues.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5474

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded: SK

Other

Total

137,500	Gallons
0	Gallons
137,500	Gallons

1145	Begin 1 st Loading SK
0210	Finish 1 st Loading SK
0600	Begin 2 nd Loading SK
0910	Finish 2 nd Loading SK

Trip # 1 - X

Trip # 2

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0925	Depart Starkist	14°16.50' S 170°41.2' W	East-12	30	29.68	Metric	kts	True*
1018	Arrive Edge of Zone	#1 14°22.57' S 170°38.66' W	" "	25	"	E+SE-1.0	8.5	160
1028	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	" "	20	29.69	" "	8.4	157
1037	Begin Discharge	#3 14°24.01' S 170°37.21' W	" "	"	"	" " X	8.3	090
52		#4 14°23.35' S 170°37.82' W	" "	"	"	" "	8.6	181
1107	Remarks:	#5 14°24.96' S 170°37.43' W	" "	"	29.68	" "	8.5	039
" 22		#6 14°22.97' S 170°37.24' W	" "	25	"	" "	2.0	320
" 37		#7 14°24.50' S 170°37.74' W	" "	"	29.67	" "	8.7	178
" 52		#8 14°24.21' S 170°36.98' W	" "	"	29.66	" "	8.9	357
1207		#9 14°23.08' S 170°37.93' W	" "	"	29.65	" "	8.7	184
" 22		#10 14°25.06' S 170°37.54' W	" "	"	"	" "	8.5	088
" 37		#11 14°23.33' S 170°36.99' W	East-10	"	29.64	" "	9.4	326
" 52		#12 14°23.97' S 170°37.88' W	" "	30	"	" "	9.8	181
1307		#13 14°23.26' S 170°37.16' W	" "	"	29.63	" "	9.5	337
		#14 14°2' S 170°3' W						
		#15 14°2' S 170°3' W						
		#16 14°2' S 170°3' W						
		#17 14°2' S 170°3' W					15	
		#18 14°2' S 170°3' W						
		#19 14°2' S 170°3' W						
		#20 14°2' S 170°3' W						
		14°2' S 170°3' W						
		14°2' S 170°3' W					20	
		14°2' S 170°3' W						
1310	Finish Discharge	#14 14°22.86' S 170°37.35' W	East-10	30%	29.63	E+SE-1.0	9.6	298
1311	Exit Discharge Zone	#15 14°22.71' S 170°37.56' W	" "	"	"	" "	9.3	320
1410	Secure SK Dock	14°16.50' S 170°41.2' W						

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 153 mins. Average Speed During Discharge: 8.9 kts. Total Time Run 4.75 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: None Discharge Rate: 101 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. P. Cook

Date: 09/15/11 Thurs.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5475

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

175,000

0

175,000

Gallons

Gallons

Gallons

9/14 1700 Begin 1st Loading SK
 9/15 0415 Finish 1st Loading SK
 Begin 2nd Loading SK
 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0525	Depart Starkist	14°16.50' S 170°41.2' W	Calm	70	29.68	Metric	kts	True*
0616	Arrive Edge of Zone	# 1 14°22.51' S 170°38.70' W	East-10	"	29.69	East-1.5	8.6	162
0626	Arrive Zone Center	# 2 14°24.0' S 170°38.3' W	" "	"	"	"	8.9	168
0635	Begin Discharge	# 3 14°24.10' S 170°37.22' W	" "	"	"	X	8.1	090
50		# 4 14°23.89' S 170°37.90' W	East-12	"	"	"	8.7	179
0705	Remarks:	# 5 14°24.70' S 170°37.11' W	" "	"	"	"	8.2	020
20		# 6 14°22.98' S 170°37.41' W	" "	"	"	"	8.5	272
35		# 7 14°24.60' S 170°37.85' W	" "	80	"	5	8.9	180
50		# 8 14°23.57' S 170°37.09' W	" "	"	"	"	8.6	346
0805		# 9 14°23.28' S 170°37.91' W	" "	"	"	"	8.9	178
20		# 10 14°24.86' S 170°37.24' W	" "	"	"	"	8.5	040
35		# 11 14°23.05' S 170°37.78' W	" "	"	"	"	9.0	236
50		# 12 14°24.80' S 170°37.85' W	" "	"	"	10	9.3	177
0905		# 13 14°24.22' S 170°37.04' W	" "	"	"	"	8.8	002
20		# 14 14°24.91' S 170°37.88' W	" "	"	"	"	9.1	180
35		# 15 14°2' S 170°3' W	" "	"	"	"	"	"
		# 16 14°2' S 170°3' W	" "	"	"	"	"	"
		# 17 14°2' S 170°3' W	" "	"	"	15	"	"
		# 18 14°2' S 170°3' W	" "	"	"	"	"	"
		# 19 14°2' S 170°3' W	" "	"	"	"	"	"
		# 20 14°2' S 170°3' W	" "	"	"	"	"	"
		14°2' S 170°3' W	" "	"	"	"	"	"
		14°2' S 170°3' W	" "	"	"	20	"	"
		14°2' S 170°3' W	" "	"	"	"	"	"
0935	Finish Discharge	# 15 14°23.44' S 170°37.12' W	East-12	80%	29.69	East-1.5	9.2	331
0943	Exit Discharge Zone	# 16 14°22.81' S 170°37.46' W	" "	"	"	" "	9.3	329
1040	Secure SK Dock	14°16.50' S 170°41.2' W	" "	"	"	"	"	"

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 180 mins. Average Speed During Discharge: 8.75 kts. Total Time Run 5.25 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: None Discharge Rate: 111 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Crook

Date: 09/17/11 Sat.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5476

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

155,000	Gallons
0	Gallons
155,000	Gallons

1600	Begin 1 st Loading SK
2100	Finish 1 st Loading SK
	Begin 2 nd Loading SK
	Finish 2 nd Loading SK

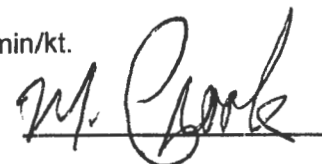
Trip # 1 - X

Trip # 2

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
						Metric	kts	True*
0515	Depart Starkist	14°16.50' S 170°41.2' W	Cal W	60	29.64			
0605	Arrive Edge of Zone	#1 14°22.58' S 170°38.66' W	East-10	"	29.66	SE-SW-2	8.5	161
0615	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	" "	"	"	" "	8.7	163
0625	Begin Discharge	#3 14°24.67' S 170°37.23' W			"	X	8.2	090
40		#4 14°23.85' S 170°37.80' W		"	"		8.9	180
55	Remarks:	#5 14°24.83' S 170°37.16' W		"	"		8.2	031
0710		#6 14°23.07' S 170°37.72' W		"	29.67		8.4	225
25		#7 14°25.16' S 170°37.55' W		70		5	8.7	137
40		#8 14°23.46' S 170°37.20' W					8.6	358
55		#9 14°24.13' S 170°37.81' W	East-12				9.0	180
0810		#10 14°24.45' S 170°37.11' W	" "	75 - Rain			8.5	004
25		#11 14°22.98' S 170°37.78' W	" "	75			8.5	183
40		#12 14°24.74' S 170°37.32' W		"		10	8.7	012
55		#13 14°22.93' S 170°37.66' W		70			8.2	251
0910		#14 14°23.85' S 170°37.75' W		"			8.9	346
		#15 14°2' S 170°3' W						
		#16 14°2' S 170°3' W						
		#17 14°2' S 170°3' W				15		
		#18 14°2' S 170°3' W						
		#19 14°2' S 170°3' W						
		#20 14°2' S 170°3' W						
		14°2' S 170°3' W						
		14°2' S 170°3' W				20		
		14°2' S 170°3' W						
0915	Finish Discharge	#15 14°23.02' S 170°37.82' W	East-12	60	29.67	SE-SW-20	8.9	354
0920	Exit Discharge Zone	#16 14°22.59' S 170°37.95' W	" "	"	"	" "	9.0	342
1020	Secure SK Dock	14°16.50' S 170°41.2' W						

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 170 mins. Average Speed During Discharge: 8.7 kts. Total Time Run 5.1 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 105 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ☒U.S.C.G.M.S.D. ☒

Master: F/V Blue Moon



Date: 09/20/11 Tues.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5477

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

138,750
0
138,750

Gallons

Gallons

Gallons

Trip # 1 - X

Trip # 2

1815	Begin 1 st Loading SK
2145	Finish 1 st Loading SK
0100	Begin 2 nd Loading SK
0425	Finish 2 nd Loading SK

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0510	Depart Starkist	14*16.50' S 170*41.2' W	Calmer	66	29.60	Metric	kts	True*
0602	Arrive Edge of Zone	# 1 14*22.52' S 170*38.84' W	East-7	70	"	E+SE-1.0	8.7	161
0612	Arrive Zone Center	# 2 14*24.0 S 170*38.3 W	"	"	"	"	8.6	162
0620	Begin Discharge	# 3 14*24.02' S 170*37.24' W	"	"	"	X	8.3	090
35		# 4 14*23.79' S 170*37.75' W	"	"	29.61	"	8.4	178
50	Remarks:	# 5 14*24.35' S 170*36.99' W	"	"	"	"	8.7	354
0703		# 6 14*23.34' S 170*37.78' W	"	"	"	"	8.5	180
20		# 7 14*25.16' S 170*37.44' W	"	60	"	5	8.6	031
35		# 8 14*23.27' S 170*37.05' W	"	"	"	"	8.4	335
50		# 9 14*24.62' S 170*37.69' W	"	50	29.62	"	8.6	179
0805		# 10 14*23.96' S 170*37.04' W	"	"	"	"	7.0	000
20		# 11 14*24.34' S 170*37.73' W	"	"	"	"	8.9	178
35		# 12 14*24.36' S 170*36.98' W	East-10	"	"	10	8.8	001
50		# 13 14*23.32' S 170*37.73' W	"	"	"	"	8.9	182
0905		# 14 14*24.21' S 170*37.56' W	"	"	29.63	"	9.1	333
20		# 15 14*2 S 170*3 W	"	"	"	"	"	"
		# 16 14*2 S 170*3 W	"	"	"	"	"	"
		# 17 14*2 S 170*3 W	"	"	"	15	"	"
		# 18 14*2 S 170*3 W	"	"	"	"	"	"
		# 19 14*2 S 170*3 W	"	"	"	"	"	"
		# 20 14*2 S 170*3 W	"	"	"	"	"	"
		14*2 S 170*3 W	"	"	"	"	"	"
		14*2 S 170*3 W	"	"	"	20	"	"
		14*2 S 170*3 W	"	"	"	"	"	"
0915	Finish Discharge	# 15 14*23.19' S 170*37.87' W	East-10	50%	29.63	E+SE-1.0	9.0	338
0920	Exit Discharge Zone	# 16 14*22.54' S 170*38.11' W	"	"	"	"	9.1	339
1010	Secure SK Dock	14*16.50' S 170*41.2' W	"	"	"	"	"	"

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 175 mins. Average Speed During Discharge: 8.7 kts. Total Time Run 5.0 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 91 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Cooke

Date: 09/22/11 Thurs.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5478

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

191,250

0

191,250

Gallons

Gallons

Gallons

1325 Begin 1st Loading SK
 2145 Finish 1st Loading SK
 0110 Begin 2nd Loading SK
 0150 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

	WP#		GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
0515		Depart Starkist		14*16.50' S	170*41.2' W	Calm	25	29.58		
0610		Arrive Edge of Zone	# 1	14*22.59' S	170*38.54' W	NE-7	"	29.59	East-1.5	8.6
0620		Arrive Zone Center	# 2	14*24.0 S	170*38.3 W	" "	30	"	"	8.2
0628		Begin Discharge	# 3	14*23.43' S	170*37.39' W	" "	"	"	" X	8.1
43			# 4	14*23.34' S	170*37.67' W	" "	"	29.60	" "	7.8
58		Remarks:	# 5	14*23.23' S	170*37.18' W	" "	"			8.4
0713			# 6	14*23.25' S	170*38.02' W	" "	"			8.3
28			# 7	14*23.43' S	170*37.06' W	" "	"		5	8.6
43			# 8	14*23.58' S	170*37.64' W	" "	"			8.6
58			# 9	14*23.07' S	170*37.28' W	NE-10	"			8.9
0813			# 10	14*23.32' S	170*37.87' W	" "	25			8.7
28			# 11	14*23.24' S	170*37.21' W	" "	"			8.9
43			# 12	14*23.85' S	170*37.25' W	" "	"		10	8.6
58			# 13	14*22.67' S	170*37.70' W	NE-12	30			8.4
0913			# 14	14*24.09' S	170*37.19' W	"	"			9.0
28			# 15	14*2 S	170*3 W					
			# 16	14*2 S	170*3 W					
			# 17	14*2 S	170*3 W				15	
			# 18	14*2 S	170*3 W					
			# 19	14*2 S	170*3 W					
			# 20	14*2 S	170*3 W					
				14*2 S	170*3 W					
				14*2 S	170*3 W				20	
				14*2 S	170*3 W					
0928		Finish Discharge	#15	14*22.71' S	170*37.85' W	NE-12	30	29.60	East-1.5	9.1
0930		Exit Discharge Zone	#16	14*22.56' S	170*38.11' W			"		8.7
1025		Secure SK Dock		14*16.50' S	170*41.2' W					

Current Direction: At Center SouthwestEnd of Discharge SWDischarge Pattern EllipseTotal Discharge Time: 180 mins. Average Speed During Discharge: 8.6 kts. Total Time Run 5.2 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 123.5 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓ U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Crook

Date: 09/24/11 Sat.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5479

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

188,000	Gallons
0	Gallons
188,000	Gallons

Begin 1st Loading SKFinish 1st Loading SKBegin 2nd Loading SKFinish 2nd Loading SK

Trip # 1 - X

Trip # 2

		WP#	GPS Position		Wind	% Clouds	Barometer	Swell	Speed	Course
								Metric	kts	True*
0520	Depart Starkist		14°16.50' S	170°41.2' W	Calm	50	29.62			
0615	Arrive Edge of Zone	# 1	14°22.58' S	170°38.66' W	"	40	29.63	E to S - 1.0	8.5	164
0624	Arrive Zone Center	# 2	14°24.0' S	170°38.3' W	"	"	29.64		8.3	163
0632	Begin Discharge	# 3	14°23.97' S	170°37.24' W	"	"	29.66		8.0	090
" 47		# 4	14°23.95' S	170°37.61' W	"	"			8.2	180
0702	Remarks:	# 5	14°24.47' S	170°36.87' W	NE - 3	30			8.1	003
" 17		# 6	14°23.00' S	170°37.71' W	" "	"			8.6	218
" 32		# 7	14°24.97' S	170°37.64' W	NE - 5	"			8.4	136
" 47		# 8	14°23.18' S	170°37.20' W	" "	"	29.67		8.8	314
0802		# 9	14°24.36' S	170°37.73' W	NE - 7	"	"		8.7	171
17		# 10	14°24.12' S	170°36.98' W		"	"		8.6	349
32		# 11	14°23.60' S	170°37.83' W		"	29.68		8.7	180
47		# 12	14°24.39' S	170°36.98' W		"	"		8.8	006
0902		# 13	14°23.17' S	170°37.76' W		35	29.69		8.9	179
17		# 14	14°25.02' S	170°37.35' W		"	"		8.5	095
32		# 15	14°2' S	170°3' W						
		# 16	14°2' S	170°3' W						
		# 17	14°2' S	170°3' W						
		# 18	14°2' S	170°3' W						
		# 19	14°2' S	170°3' W						
		# 20	14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W						
			14°2' S	170°3' W						
0932	Finish Discharge	#15	14°22.99' S	170°37.32' W	NE - 7	35	29.69	E to S - 1.0	9.2	329
0935	Exit Discharge Zone	#16	14°22.72' S	170°37.55' W	" "	"	"	" "	9.2	335
1035	Secure SK Dock		14°16.50' S	170°41.2' W						

Current Direction: At Center WestEnd of Discharge WSWDischarge Pattern EllipseTotal Discharge Time: 180 mins. Average Speed During Discharge: 8.5 kts. Total Time Run 5.25 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 123 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ☒U.S.C.G.M.S.D. ☒

Master: F/V Blue Moon

Date: 09/27/11 Tues.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5480

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

193,750

Gallons

Gallons

193,750

Gallons

3/25 1800 Begin 1st Loading SK
 1/27 0093 Finish 1st Loading SK
 Begin 2nd Loading SK
 Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course
0520	Depart Starkist	14°16.50' S 170°41.2' W	East-10	60	29.61	Metric	kts	True*
0615	Arrive Edge of Zone	#1 14°22.56' S 170°38.73' W	East-12	70	29.63	East-60	8.1	168
0625	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	" "	"	"	" "	8.1	159
0635	Begin Discharge	#3 14°24.06' S 170°37.22' W	" "	"	"	East-1.5 X	7.5	090
50		#4 14°23.47' S 170°37.79' W	" "	"	29.64	" "	8.0	178
0705	Remarks:	#5 14°24.68' S 170°37.10' W	" "	80	"	" "	7.6	009
20		#6 14°22.91' S 170°37.46' W	" "	"	29.65	" "	7.5	272
35		#7 14°24.48' S 170°37.76' W	East-15	"	"	5	8.3	180
50		#8 14°23.52' S 170°37.02' W	" "	"	"	"	7.9	354
0805		#9 14°24.31' S 170°37.84' W	" "	"	29.64	" "	8.4	179
20		#10 14°24.25' S 170°37.14' W	" "	"	29.63	" "	8.2	007
35		#11 14°24.42' S 170°37.85' W	" "	70	"	" "	8.5	182
50		#12 14°24.47' S 170°37.20' W	" "	"	"	10	8.5	016
0905		#13 14°22.83' S 170°37.54' W	" "	"	"	" "	8.9	269
20		#14 14°24.58' S 170°37.78' W	" "	60	"	" "	8.8	180
35		#15 14°23.50' S 170°37.13' W	" "	"	"	" "	8.6	327
		#16 14°2' S 170°3' W						
		#17 14°2' S 170°3' W				15		
		#18 14°2' S 170°3' W						
		#19 14°2' S 170°3' W						
		#20 14°2' S 170°3' W						
		14°2' S 170°3' W						
		14°2' S 170°3' W				20		
		14°2' S 170°3' W						
0940	Finish Discharge	#16 14°23.02' S 170°37.35' W	East-15	60%	29.63	East-1.5	8.8	332
0942	Exit Discharge Zone	#17 14°22.79' S 170°37.46' W	" "	"	29.63	" "	8.9	336
1040	Secure SK Dock	14°16.50' S 170°41.2' W						

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 185 mins. Average Speed During Discharge: 8.25 kts. Total Time Run 5.33 hr.Navigational Plot made: Yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 127 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

MR

Date: 09/29/11 Thurs.

F/V Blue Moon Ocean Dumping Log

Voyage #: 5481

Time

Permit # OD 93-01 & OD 93-02

Volume Loaded:

SK

Other

Total

200,000

Gallons

0

Gallons

200,000

Gallons

9/28 0100 Begin 1st Loading SK
 2130 Finish 1st Loading SK
 / Begin 2nd Loading SK
 / Finish 2nd Loading SK

Trip # 1 - X

Trip # 2

	WP#	GPS Position	Wind	% Clouds	Barometer	Swell	Speed	Course	True*
0515	Depart Starkist	14°16.50' S 170°41.2' W	Calm	40	29.63	Metric	kts		
0610	Arrive Edge of Zone	#1 14°22.56' S 170°38.60' W	East-7	"	29.64	E/SE-1.0	8.2	161	
0620	Arrive Zone Center	#2 14°24.0' S 170°38.3' W	" "	"	"	"	7.1	162	
0630	Begin Discharge	#3 14°24.1' S 170°37.19' W	East-10	30	"	X	7.5	090	
45		#4 14°23.9' S 170°37.24' W	" "	"	29.65	"	8.3	183	
0700	Remarks:	#5 14°24.93' S 170°37.31' W	" "	"	29.65	"	7.7	037	
15		#6 14°23.03' S 170°37.28' W	" "	25	"	"	8.2	305	
30		#7 14°24.67' S 170°37.7' W	" "	"	29.66	"	8.5	183	
45		#8 14°23.88' S 170°37.06' W	East-10	"	"	"	8.6	002	
0800		#9 14°24.11' S 170°37.77' W	East-12	"	"	"	8.5	178	
15		#10 14°24.64' S 170°37.19' W	" "	20	"	"	8.5	006	
30		#11 14°23.33' S 170°37.72' W	" "	"	"	"	8.8	177	
45		#12 14°24.98' S 170°37.38' W	" "	"	"	10	8.5	021	
0900		#13 14°23.21' S 170°37.16' W	" "	25	"	"	8.6	305	
15		#14 14°24.83' S 170°37.69' W	" "	"	"	"	8.9	180	
30		#15 14°23.41' S 170°37.03' W					9.1	342	
		#16 14°2' S 170°3' W							
		#17 14°2' S 170°3' W					15		
		#18 14°2' S 170°3' W							
		#19 14°2' S 170°3' W							
		#20 14°2' S 170°3' W							
		14°2' S 170°3' W							
		14°2' S 170°3' W					20		
		14°2' S 170°3' W							
0935	Finish Discharge	#16 14°23.01' S 170°37.50' W	East-12	25	29.66	E/SE-1.0	8.7	307	
0938	Exit Discharge Zone	#17 14°22.67' S 170°37.78' W					9.1	334	
1035	Secure SK Dock	14°16.50' S 170°41.2' W							

Current Direction: At Center WestEnd of Discharge WestDischarge Pattern EllipseTotal Discharge Time: 185 mins. Average Speed During Discharge: 8.5 kts. Total Time Run 5:33 hr.Navigational Plot made: yes Presence of Plume? NoTime and position of any floating material: NoneDischarge Rate: 127 Gallons/min/kt.Unusual Occurrences? NoneNotifications made: A.S.P.A. ✓U.S.C.G.M.S.D. ✓

Master: F/V Blue Moon

M. Crooks

N ▲

170° 41.98 W

170° 38.55 W

170° 35.12 W

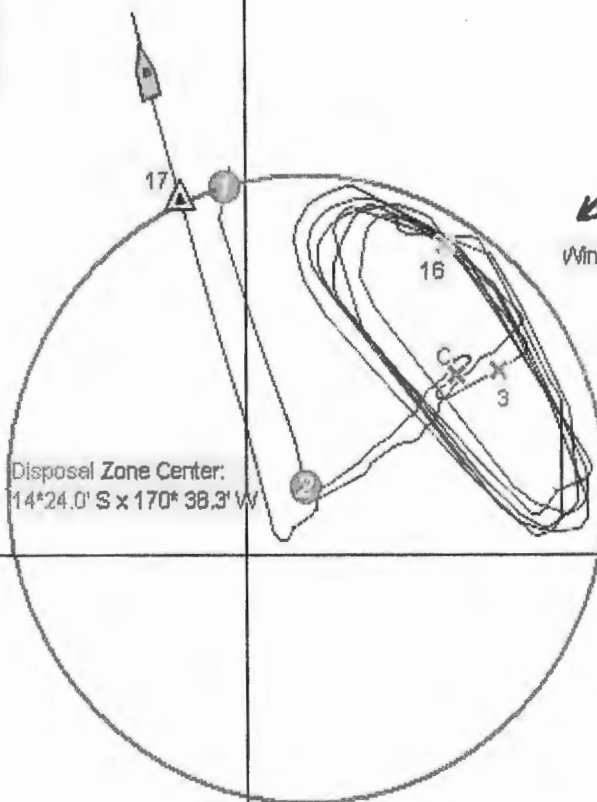
14° 20.93 S

01 September, 2011 - Thurs.
Voyage # 5468
Starkist Cargo, Trip #1
*Ocean Monitoring/Sampling Conducted

M. Crook

M. Crook, Master
FV Blue Moon

14° 24.36 S



Disposal Zone Center:
14° 24.0' S x 170° 38.3' W

Wind: Northeast @ 10 - 15 kts.

N ▲

170° 41.98 W

170° 38.55 W

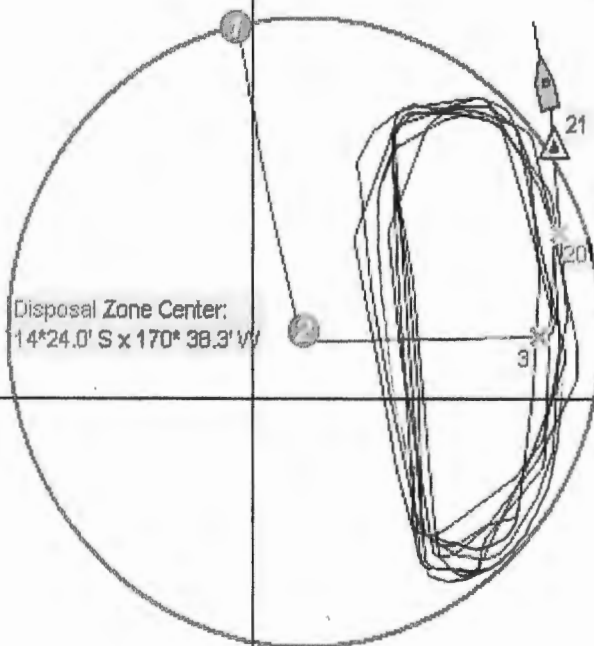
170° 35.12 W

14° 20.93 S

03 September, 2011 - Sat.
Voyage # 5470
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Disposal Zone Center:
14°24.0' S x 170°38.3' W

Wind: East @ 10 - 12 kts.

14° 24.36 S

N ▲

170 40.23 W

170 36.82 W

170 33.41 W

07 September, 2011 - Weds.

Voyage # 5471

Starkist Cargo, Trip #1

M. Crook

M. Crook, Master

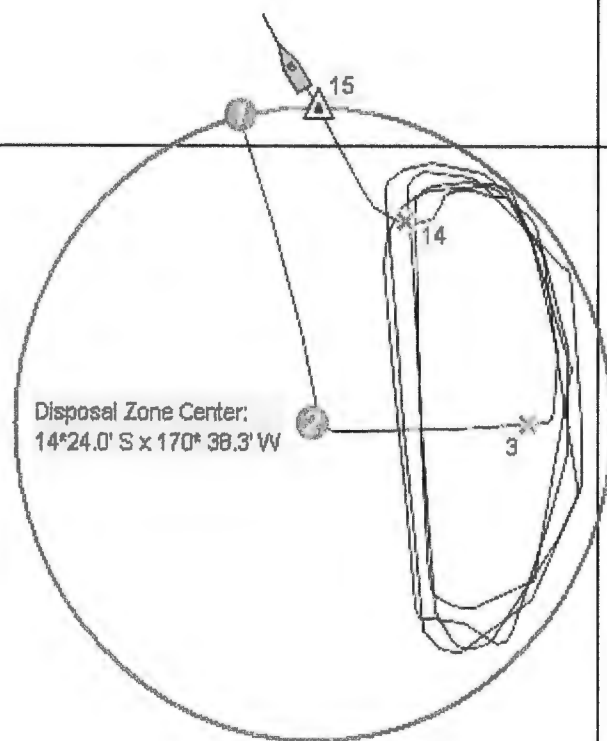
F/V Blue Moon

14 22.73 S

Disposal Zone Center:
14°24.0' S x 170° 38.3' W

←
Wind: East @ 10 - 12 kts.

14 26.14 S



N ▲

170° 40.23' W

170° 36.82' W

170° 33.41' W

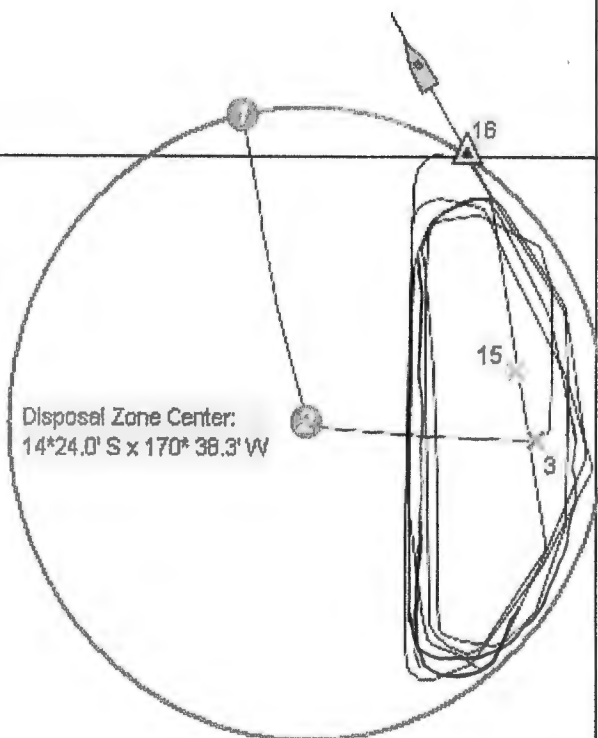
14° 22.73' S

14° 26.14' S

09 September, 2011 - Fri.
Voyage # 5472
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Disposal Zone Center:
14°24.0' S x 170°38.3' W



Wind: East @ 10 - 12 kts.

N ▲

170 40.23 W

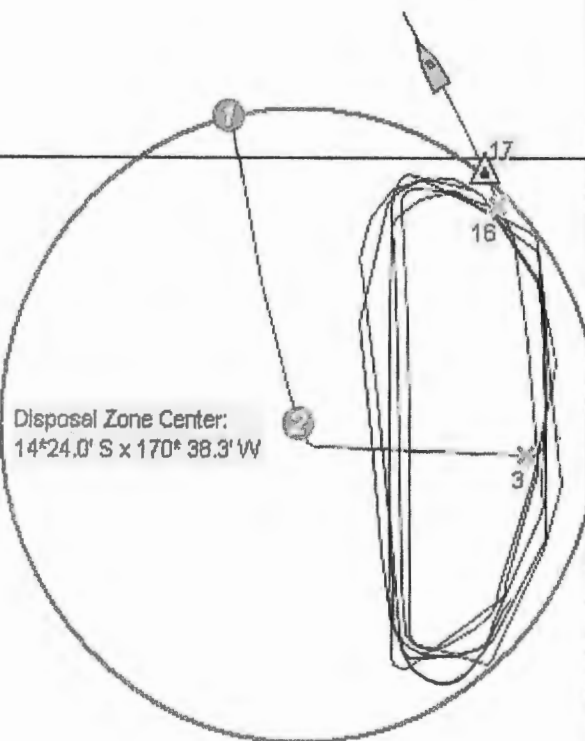
170 36.82 W

170 33.41 W

11 September, 2011 - Sun.
Voyage # 5473
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon



Disposal Zone Center:
14°24.0' S x 170° 38.3' W



Wind: East @ 12 - 15 kts.

14 22.73 S

4 26.14 S

NA

170 40.23 W

170 36.82 W

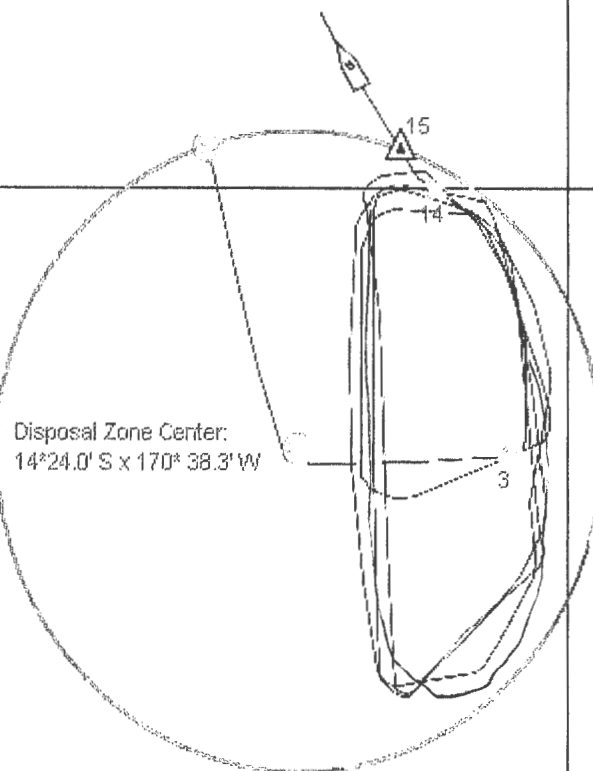
170 33.41 W

13 September, 2011 - Tues.
Voyage # 5474
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

14 22.73 S



Wind: East @ 10-12 kts.

14 26.14 S

N ▲

170 40.23 W

170 36.82 W

170 33.41 W

15 September, 2011 - Thurs.

Voyage # 5475

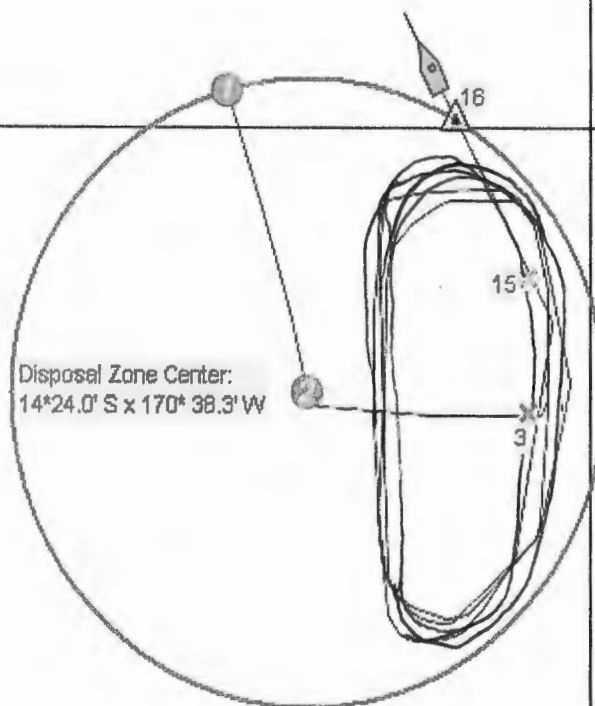
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master

F/V Blue Moon

14 22.73 S



Wind: East @ 10 - 12 kts.

426.14 S



170° 40.23 W

170° 36.82 W

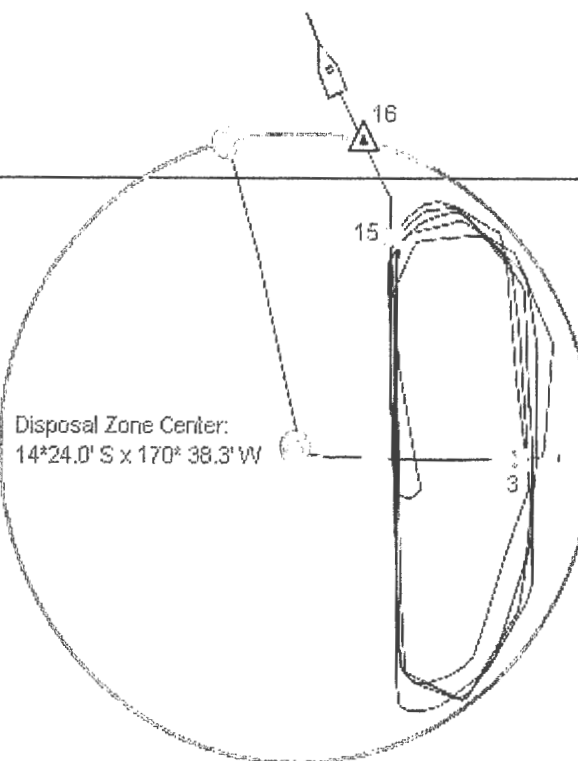
170° 33.41 W

17 September, 2011 - Sat.
Voyage # 5476
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

14° 22.73 S



Wind: East @ 10 - 12 kts.

14° 26.14 S

N ▲

170 40.23 W

170 36.82 W

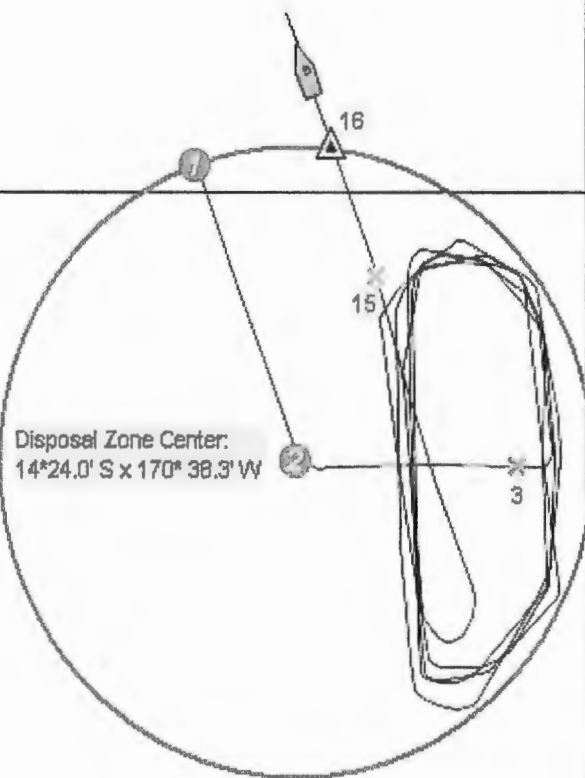
170 33.41 W

20 September, 2011 - Tues.
Voyage # 5477
Starlist Cargo, Trip #1

M. Crook

M. Crook, Master
FV Blue Moon

14 22.73 S



Disposal Zone Center:
14°24.0' S x 170°38.3' W



Wind: East @ 7 - 10 kts.

14 26.14 S

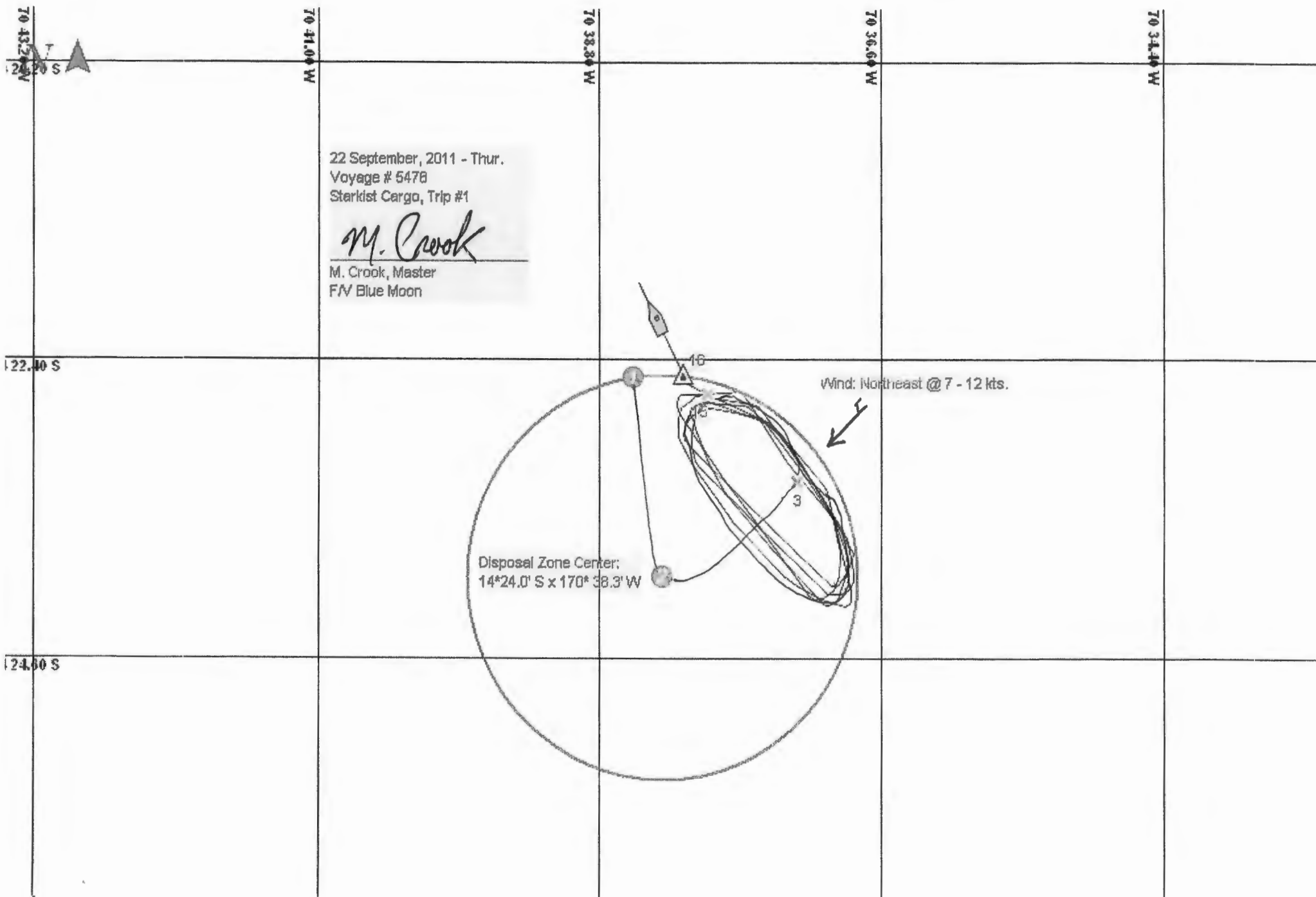
22 September, 2011 - Thur.
Voyage # 5478
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

Wind: Northeast @ 7 - 12 kts.

Disposal Zone Center:
14°24.0' S x 170°38.3' W



N ▲

24 September, 2011 - Sat.
Voyage # 5479
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
FV Blue Moon

422.73 S

170 40.23 W

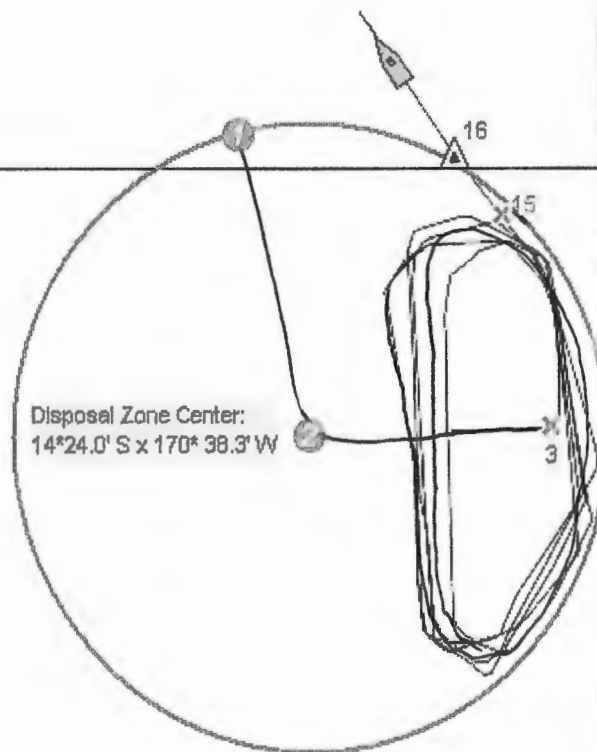
170 36.82 W

170 33.41 W

Disposal Zone Center:
14°24.0' S x 170°38.3' W

Wind: Calm to NE @ 3 - 7 kts.

426.14 S



420.20 S



170 41.00 W

170 38.30 W

170 36.60 W

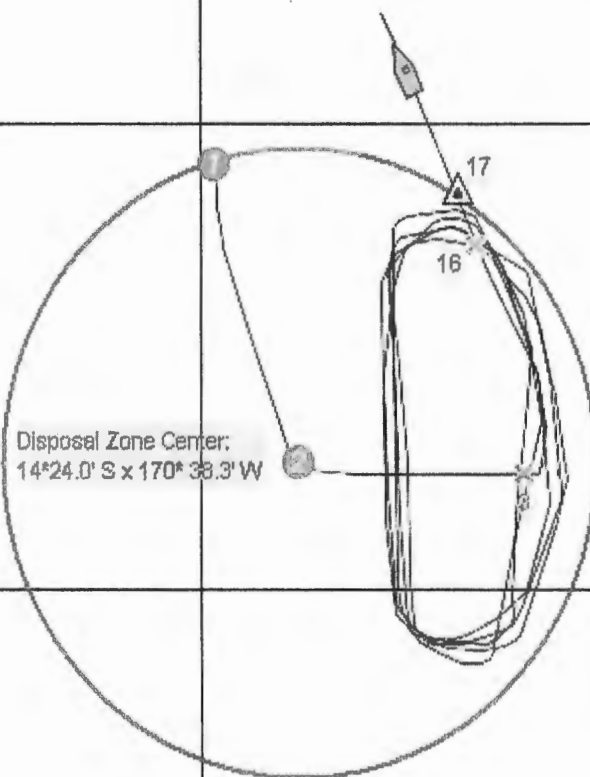
170 34.90 W

27 September, 2011 - Tues.
Voyage # 5480
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

422.40 S



Disposal Zone Center:
14°24.0' S x 170°38.3' W



Wind: East @ 10 - 15 kts.

424.60 S

N ▲

170 40.23 W

170 36.82 W

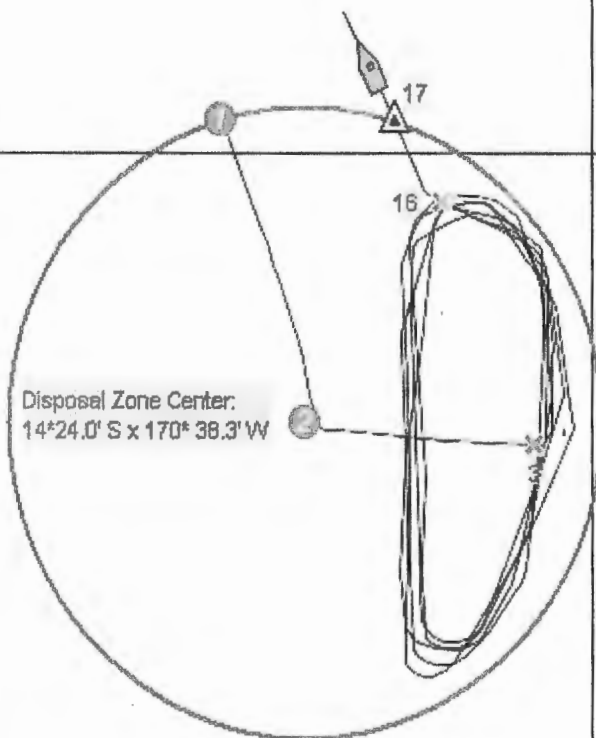
170 33.41 W

29 September, 2011 - Thurs.
Voyage # 5481
Starkist Cargo, Trip #1

M. Crook

M. Crook, Master
F/V Blue Moon

122.73 S



←
Wind: East @ 10 - 12 kts.

July 12th, 2011

Michael Wolfram
Program Manager
Pacific Islands Office
USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

RE: OCEAN DUMPING PERMIT OD93-02 SPECIAL

Dear Michael:

Pursuant to the requirements of the above referenced permit, we are herewith submitting the Quarterly ocean dumping report for the period of April 2011 through June 2011 for COS Samoa Packing Company. No waste has been generated or transferred or dumped in this quarter. Enclosed are the following:

- * EPA Forms 1, 2 and 3.
- * Results of Monthly Onshore Storage Tank Analysis. No testing was done. N/A
- * Letter to ASEPA reporting exceedances and irregularities during the 3 month period where applicable. There were no exceedances. N/A
- * Monthly Site Monitoring Reports. N/A
- * Results of Monthly Site Monitoring Analysis.

Please advise if additional information is required.

Sincerely,



Craig Double
Facility Manager
Samoa Tuna Processors Inc.

Enclosures:
Pacific Island Office

Cc(1) Except Vessel Logs

Director
American Samoa Environmental
Protection Agency
American Samoa Government
Pago Pago, American Samoa 96799

Cc(1) Complete Report

Director of Engineering
Chicken of the Sea International
9330 Scranton Road
Suite 500
San Diego, California 92121

Allan Ota
Wetlands Office
US EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

Cc(1) Vessel Logs Only

Commanding Chief
U.S. Coast Guard Liaison Office
P.O. Box 249
Pago Pago, American Samoa 96799

Cc(1) Except Vessel Logs:

Project Leader
Office of Environmental Services
U.S. Fish and Wildlife Service
300 Ala Moana Boulevard
P.O. Box 50167
Honolulu, Hawaii 96850

John Naughton
Pacific Island Regional Office
1601 Kapiolani BLvd.
Suite 1110
Honolulu, Hawaii 96814-4700

Executive Director
Western Pacific Regional Fishery
Management Council
1164 Bishop Street, Suite 1405
Honolulu, Hawaii 96813

APPENDIX B - REPORT FORM 1

Monthly Volumes of COS Samoa Packing Fish Processing Wastes Generated
Per Day and Volumes of Fish Processing Wastes Disposed at the Ocean Site

Month: April 2011

OD 93-02 Permit Limits	DAF Sludge Generated (gallons/day)	Precooker Water Generated (gallons/day)	Press Water Generated (gallons/day)	Total Generated (gallons/day)	Volume Ocean Disposed (gallons/day)
	60,000	100,000	40,000	200,000	200,000
April 2011	No waste for April				
Totals	0	0			

Note: An asterisk(*) to the right of the fish processing waste volume signifies that a violation of the permit limit has occurred.

The number of violations are shown in the Monthly "Totals" row.

Monthly quantities of alum (aluminum sulfate) and coagulant polymer added to the fish processing waste streams:

Aluminum Sulfate:

0 pounds/month

APPENDIX B - REPORT FORM 1

Monthly Volumes of COS Samoa Packing Fish Processing Wastes Generated
Per Day and Volumes of Fish Processing Wastes Disposed at the Ocean Site

Month: May 2011

OD 93-02 Permit Limits	DAF Sludge Generated (gallons/day)	Precooker Water Generated (gallons/day)	Press Water Generated (gallons/day)	Total (Generated (gallons/day)	Volume Ocean Disposed (gallons/day)
	60,000	100,000	40,000	200,000	200,000
May	No waste for May			0	
Totals	0	0	0	0	0

Note: An asterisk(*) to the right of the fish processing waste volume signifies that a violation of the permit limit has occurred.

The number of violations are shown in the Monthly "Totals" row.

Monthly quantities of alum (aluminum sulfate) and coagulant polymer added to the fish processing waste streams:

Aluminum Sulfate:

0 pounds/month

APPENDIX B - REPORT FORM 1

Monthly Volumes of COS Samoa Packing Fish Processing Wastes Generated
Per Day and Volumes of Fish Processing Wastes Disposed at the Ocean Site

Month: June 2011

OD 93-02 Permit Limits	DAF Sludge Generated (gallons/day)	Precooker Water Generated (gallons/day)	Press Water Generated (gallons/day)	Total Generated (gallons/day)	Volume Ocean Disposed (gallons/day)
	600,00	100,000	40,000	200,000	200,000
June 2011	No waste for June			0	0
Totals	0	0		0	0

Note: An asterisk(*) to the right of the fish processing waste volume signifies that a violation of the permit limit has occurred.

The number of violations are shown in the Monthly "Totals" row.

Monthly quantities of alum (aluminum sulfate) and coagulant polymer added to the fish processing waste streams:

Aluminum Sulfate:

0 pounds/month

APPENDIX B - REPORT FORM 2

Data Form for 3-Month Report on Waste Stream Analyses for COS Samoa Packing MPRSA 102 Permit #OD 93-02

Reporting Period: From April 2011 to June 2011

COS Samoa Packing - Onshore Storage Monitoring Report

Month & Year	Total Solids (mg/L)	Total Volatile Solids (mg/L)	5-Day Biological Oxygen Demand (mg/L)	Oil and Grease (mg/L)	Total Phosphorus (mg/L)	Total Nitrogen (mg/L)	Ammonia (mg/L)	pH (pH units)	Density (g/mL)
April-11									
May-11									
June-11									
OD 93-02 Permit Limits	54,590	58,760	87,780	48,630	2,820	11,070	5,200	5.8 to 7.5	.97 to 1.03

NOTE: An asterisk(*) next to the waste concentration signifies that an exceedance of the permit limit has occurred.

Cumulative Yearly Data on Fish Processing Wastes
Generated at COS Samoa Packing Company and Disposed at the Ocean Site
MPRSA 102 Special Permit #OD 93-02

Reporting Period: From 01 JAN 2011 TO 31 DEC 2011

Month & Year	DAF Sludge Generated (gallons/month)	Cooker Water Generated (gallons/month)	Press Water Generated (gallons/month)	Total Generated (gallons/month)	Coagulate polymer (pounds/month)	Volume Ocean Disposed (gallons/month)
Jan. 2011	0	0	0	0	0	0
Feb. 2011	0	0	0	0	0	0
Mar. 2011	0	0	0	0	0	0
Apr. 2011	0	0	0	0	0	0
May. 2011	0	0	0	0	0	0
Jun. 2011	0	0	0	0	0	0
Jul. 2011						
Aug. 2011						
Sep. 2011						
Oct. 2011						
Nov. 2011						
Dec. 2011						
Cumulative Yearly Totals	0	0	0	0	0	0

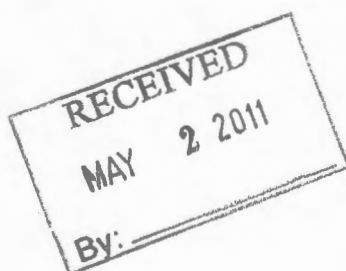
NOTE: A separate table shall be prepared for each calendar year.

Ocean Disposal Site Monitoring Report

(OD Permit 93-01 & 93-02)

28 April, 2011

Monitoring Vessel:	F/V Blue Moon
Discharge Vessel:	F/V Blue Moon
Chief Investigator:	Mike Crook
Starkist Samoa Liaison:	Joe Carney
STP/Tri Marine Liaison:	Craig Double
Determination of Sampling Positions:	All positions obtained by GPS Satellite Navigation



Mike Crook
P.O. Box 4933
Pago Pago, AS 96799
30 April, 2011

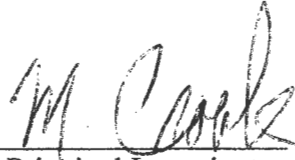
Introduction

On April 28, 2011 the tank-ship *Blue Moon* departed Starkist Samoa dock bound for the designated ocean dump-site area approximately seven miles south of Pago Pago Harbor, American Samoa, on a routine wastewater disposal operation and for the purpose of monitoring this disposal of tuna cannery generated hi-strength liquid wastes into the waters of the Pacific Ocean. This monitoring and reporting were conducted in compliance with general permit conditions and Appendix A of Ocean Dumping Permits OD 93-01 & OD 93-02.

Chronology of Events

- 0505:** The *Blue Moon* departed Pago Pago Harbor bound for the dump-site location with Master/Principal Investigator, Chief and Mate on board.
- 0558:** The *Blue Moon* entered the dumpzone circle @ 14°22.6' S x 170°38.7' W.
- 0608:** The *Blue Moon* arrived at the dump-zone center, where observed east winds and slight east to southeasterly seas initially indicated disposal operations be conducted in the eastern dump-zone quadrant.
- 0620:** Control Station Monitoring. The *Blue Moon* arrived 1.1 nautical miles (NM) up-current or east (E) of the dump-zone center, where discrete seawater samples were taken from depths of 1, 3, and 10 meters. Water temperatures, color, pH and observed sea/sky conditions with stations' position were recorded (Table 1). Seas at this time were slight with East & SE swells to 1.5 meters and east winds at 10 knots (kts.) with the barometer reading 29.56. Current set and drift of the ship, by GPS, were to the west at 1.2 knots. No floating materials or sea life were observed here.
- 0628:** The *Blue Moon* began disposal operations in the eastern dump zone quadrant and continued discharging cargo (high strength waste water) with a north (N) to south (S) reciprocal, elongated elliptical pattern, approximately 2.25 miles long (see Plot 1) until 0943 hrs.
- 0945:** Station One Monitoring (See Plot #1). Discrete water samples were drawn from depths of 1, 3, and 10 meters. Water temperatures, pH, stations' position and water color observations were all recorded in Table 1. The east wind had increased to 15 kts. with cloudy skies. The waste plume was not visibly present here and was only apparent further down-current to the west some distance, (at least 0.5 miles) away.. The current/wind drift of the ship was GPS determined to be westerly @ 1.4 knots. A small shark was seen to follow the water sampler up from the 10 meter drop. No floating or suspended materials were noted here.

- 0955:** Station Two Monitoring. Station two was sampled with the same procedures as station one with measurements and observations being recorded in Table 1. This position showed similar coloration qualities as those at Station #1, with only clear natural blue appearing seawater and no visible indication of the waste plume. The average drift rate of the ship with current and wind was GPS determined here to be westerly (W) at a rate of 1.6 knots between stations 2 & 3 (See Plot #1). No sea-life or floating materials were noted at this position.
- 1005:** Station Three Monitoring. Seawater samples were collected and measurements taken as with Stations 1 & 2. This position showed a broad area of broken streaks and patches of moderate surface sheen over clear sub-surface waters. Sea & wind conditions remained the same as with the previous two sample stations and the drift rate of the ship between Stations #3 & 4 was 1.5 knots, again, to the west.
- 1015:** Station Four monitoring. This area showed more patches of moderate surface sheen along with a sparse concentration of fine, light grey colored suspended particulate material. The westerly current/drift rate of the ship was again noted here to be at 1.5 knots. No sea-life was observed.
- 1025:** Station Five monitoring. Sampling for this final station was conducted at the visual leading edge of the waste plume and approximately 0.41 NM west of the zone center (See Plot #1). The leading edge of the waste plume was distinctive at this location as an unbroken line of heavy glassy surface sheen with clear, natural appearing blue waters further down-current to the west. Also present in and under this sheen, was a fairly dense concentration of floating and suspended particulate material extending down to the limit of water visibility. All these materials were light brown, gray or ash colored. The final drift rate of the ship was noted to be 1.4 knots. Other than a few random seabirds flying by and the shark noted at Station #1, no significant sea life was observed at this position or any of the previous stations. The final barometer reading was 29.59 when monitoring activities were concluded at 1035 hrs. The *Blue Moon* exited the disposal zone at 1045 hours and arrived back in Pago Pago Harbor to deliver the collected samples to the Starkist Samoa Co. laboratory at 1135 hours.

Prepared by 
Mike Crook, Principal Investigator

OCEAN DUMPING RESEARCH PERMIT: OD-93-01 & 02

Table 1

Date: April 28, 2011	Sea Conditions: Slight w/ East & Southeast swells to 1.5 meters.					Wind: East @ 10 - 15 knots	Visibility: Good 6 - 10+ miles
	Barometer: 29.53 - 29.59		Current Set & Drift Rate: West @ average 1.5 knots			Sky: Cloudy, 70 - 1000%	
Time	Station	Depth (meters)	Temp. (°C)	pH	Odor	Color	
0620	Control	1	28.3	7.3	None	Clear and natural deep pelagic blue w/ no floating or suspended materials.	
		3	28.3	7.3			
		10	28.3	7.3			
0945	Station 1	1	28.9	7.3	None	Same as Control Station.	
		3	28.9	7.3			
		10	28.3	7.3			
0955	Station 2	1	28.9	7.3	None	Again, same as Control and Station #1.	
		3	28.9	7.3			
		10	28.3	7.3			
1005	Station 3	1	28.9	7.3	Slightly Pungent	Broad area of broken streaks and patches of moderate glassy surface sheen over deep, clear blue. No floating or suspended particulate or other material.	
		3	28.9	7.3			
		10	28.9	7.3			
1015	Station 4	1	28.9	7.3	Slightly Pungent	More broken patches of moderate surface sheen along with suspended, fine & light colored suspended particulates, not particularly dense in concentration.	
		3	28.9	7.3			
		10	28.9	7.3			
1025	Station 5	1	28.9	7.3	Pungent	Leading edge of the waste plume: Distinct area of an unbroken north to south line of heavy surface sheen along with a fairly dense concentration of floating and suspended, brownish particulate material.	
		3	28.9	7.3			
		10	28.9	7.3			

SAMPLE STATIONS POSITIONS

	LATITUDE		LONGITUDE	
Control - C	14° 24.08'	South	170° 37.26'	West
Station 1	14° 24.03'	South	170° 36.87'	West
Station 2	14° 24.06'	South	170° 37.14'	West
Station 3	14° 24.15'	South	170° 37.50'	West
Station 4	14° 24.09'	South	170° 37.82'	West
Station 5	14° 23.99'	South	170° 38.58'	West

N ▲

170° 41.40 W

170° 38.02 W

170° 34.64 W

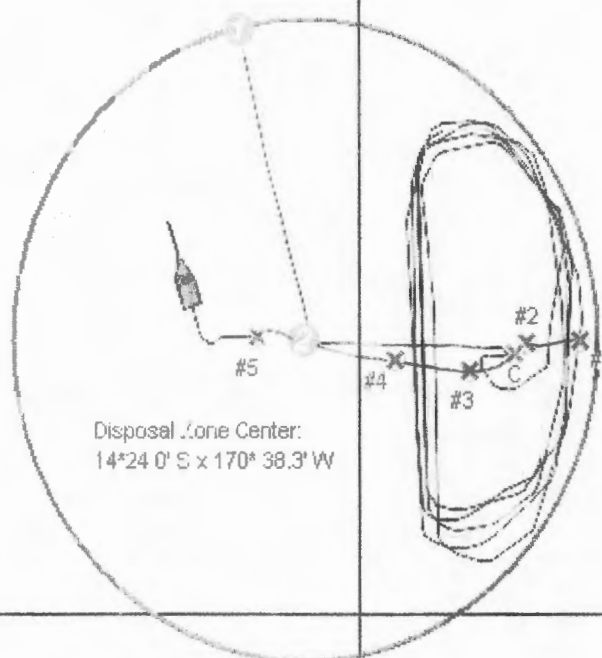
PLOT #1

Ocean Monitoring Sampling Stations
Control (C) and Sampling Stations #1 - #5
28 April, 2011

M. Crook

M. Crook, Investigator

14° 21.90 S



←
Current Set: West

14° 25.28 S

Ocean Disposal Site Monitoring Report

(OD Permit 93-01 & 93-02)

24 May, 2011

Monitoring Vessel:	F/V Blue Moon
Discharge Vessel:	F/V Blue Moon
Chief Investigator:	Mike Crook
Starkist Samoa Liaison:	Joe Carney
STP/Tri Marine Liaison:	Craig Double
Determination of Sampling Positions:	All positions obtained by GPS Satellite Navigation



Mike Crook
P.O. Box 4933
Pago Pago, AS 96799
26 May, 2011

Introduction

On May 24, 2011 the tank-ship *Blue Moon* departed Starkist Samoa dock bound for the designated ocean dump-site area approximately seven miles south of Pago Pago Harbor, American Samoa, on a routine wastewater disposal operation and for the purpose of monitoring this disposal of tuna cannery generated hi-strength liquid wastes into the waters of the Pacific Ocean. This monitoring and reporting were conducted in compliance with general permit conditions and Appendix A of Ocean Dumping Permits OD 93-01 & OD 93-02.

Chronology of Events

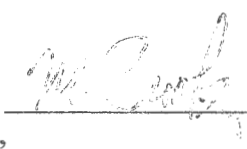
- 0505: The *Blue Moon* departed Pago Pago Harbor bound for the dump-site location with Master/Principal Investigator, Chief and Mate on board.
- 0555: The *Blue Moon* entered the dumpzone circle @ 14°22.6' S x 170°38.7' W.
- 0605: The *Blue Moon* arrived at the dump-zone center, where observed ESE winds and slight south to southeasterly seas initially indicated disposal operations be conducted in the eastern dump-zone quadrant.
- 0615: Control Station Monitoring. The *Blue Moon* arrived 1.1 nautical miles (NM) up-current or east (E) of the dump-zone center, where discrete seawater samples were taken from depths of 1, 3, and 10 meters. Water temperatures, color, pH and observed sea/sky conditions with stations' position were recorded (Table 1). Seas at this time were slight with south & SE swells to 1.5 meters and east winds at 10 knots (kts.) with the barometer reading 29.58. Current set and drift of the ship, by GPS, were to the west at 0.7 knots. No floating materials or sea life were observed here.
- 0623: The *Blue Moon* began disposal operations in the eastern dump zone quadrant and continued discharging cargo (high strength waste water) with a north (N) to south (S) reciprocal, elongated elliptical pattern, approximately 2.25 miles long (see Plot 1) until 0853 hrs.
- 0905: Station One Monitoring (See Plot #1). Discrete water samples were drawn from depths of 1, 3, and 10 meters. Water temperatures, pH, stations' position and water color observations were all recorded in Table 1. The east wind had increased to 12 kts. with partly cloudy skies. The waste plume, visibly present here as a heavy surface sheen, also had abundant floating and suspended material as described in Table 1. The current/wind drift of the ship was GPS determined to be westerly @ 0.5 knots. No sea-life was observed.

0915: Station Two Monitoring. Station two was sampled with the same procedures as station one with measurements and observations being recorded in Table 1. This position showed a lighter sheen than Station #1 and again, had floating and suspended particulates (See Table #1). The average drift rate of the ship with current and wind was GPS determined here to be westerly (W) at a rate of 0.6 knots between Stations #2 & 3 (See Plot #1). No sea-life was noted at this position.

0925: Station Three Monitoring. Seawater samples were collected and measurements taken as with Stations 1 & 2. This position, 0.25 NM down-current (West) of Station #2, showed no sign of the plume's characteristic surface sheen or additional floating / suspended particulate material. Sea & wind conditions remained the same as with the previous two sample stations and the drift rate of the ship between Stations #3 & 4 was 0.5 knots, again, to the west.

0935: Station Four monitoring. This area showed no sign of the typical surface sheen but did have a sparse concentration of fine, light gray colored floating and suspended particulate material. The westerly current/drift rate of the ship was again noted here to be at 0.5 knots. No sea-life was observed.

1025: Station Five monitoring. Sampling for this final station was conducted at the visual leading edge of the waste plume and approximately 0.28 NM southeast of the zone center (See Plot #1). The leading edge of the waste plume was not distinctive at this location but showed only a few broken streaks of slightly glassy surface sheen with clear, natural appearing blue waters further down-current to the west. No additional floating and suspended particulate material was visible. The final drift rate of the ship was noted to be westerly at 0.5 knots. Other than a few random seabirds flying, no significant sea life was observed at this position or any of the previous stations. The final barometer reading was 29.60 when monitoring activities were concluded at 0950 hrs. The *Blue Moon* exited the disposal zone at 1000 hours and arrived back in Pago Pago Harbor to deliver the collected samples to the Starkist Samoa Co. laboratory at 1050 hours.

Prepared by 
Mike Crook,
Principal Investigator

OCEAN DUMPING RESEARCH PERMIT: OD-93-01 & 02

Table 1

Date: May 24, 2011	Sea Conditions: Slight w/ South & Southeast swells to 1.5 meters.					Wind: ESE @ 7 - 12 knots	Visibility: Unlimited
	Barometer: 29.58 - 29.60		Current Set & Drift Rate: West @ average 0.5 knots			Sky: Cloudy, 30 - 40%	
Time	Station	Depth (meters)	Temp. (°C)	pH	Odor	Color	
0615	Control	1	27.2	8.0	None	Clear and natural deep pelagic blue w/ no floating or suspended materials.	
		3	27.2	7.9			
		10	27.2	7.7			
0905	Station 1	1	28.3	8.0	Slightly Pungent	Patches of moderate surface sheen along with abundant, large, brown colored floating & suspended particulates, fairly dense in concentration extending to the limit of visibility.	
		3	28.3	7.7			
		10	27.8	7.9			
0915	Station 2	1	27.8	7.7	Slightly Pungent	Very light surface sheen but floating and suspended brownish particulates still present. Smaller in size and less concentrated than Station #1.	
		3	27.8	7.9			
		10	27.8	8.1			
0925	Station 3	1	28.3	7.9	Slightly Pungent	Clear and natural deep pelagic blue w/ no floating or suspended materials. No sign of the wastewater plume at this position.	
		3	28.3	7.9			
		10	28.3	8.0			
0935	Station 4	1	28.3	8.0	Slightly Pungent	No visible surface sheen however still notable, fine & light gray or ash colored suspended particulates, not particularly dense in concentration. Nothing floating on surface	
		3	28.3	7.9			
		10	28.3	7.7			
0945	Station 5	1	28.3	7.8	None	Leading edge of the waste plume: Only the occasional light streak of surface sheen over deep, clear, natural appearing blue water. No more suspended or floating particulate material noted.	
		3	28.3	8.0			
		10	28.3	8.0			

SAMPLE STATIONS POSITIONS

	LATITUDE		LONGITUDE	
Control - C	14° 24.05'	South	170° 37.22'	West
Station 1	14° 24.14'	South	170° 36.85'	West
Station 2	14° 24.20'	South	170° 37.09'	West
Station 3	14° 24.22'	South	170° 37.37'	West
Station 4	14° 24.21'	South	170° 37.68'	West
Station 5	14° 24.21'	South	170° 38.10'	West



170 40.23 W

170 36.82 W

170 33.41 W

POOT #1

Ocean Monitoring Sampling Stations
Control (C) and Sampling Stations #1 - #5
2 - May, 2011

M. Crook

M. Crook, Investigator

122.73 S

Disposal Zone Center:
14°24.0' S x 170°38.3' W

#5 #4 #3 #2



Current Set: W/S

126.14 S

Ocean Disposal Site Monitoring Report

(OD Permit 93-01 & 93-02)

04 June, 2011

Monitoring Vessel:	F/V Blue Moon
Discharge Vessel:	F/V Blue Moon
Chief Investigator:	Mike Crook
Starkist Samoa Liaison:	Joe Carney
STP/Tri Marine Liaison:	Craig Double
Determination of Sampling Positions:	All positions obtained by GPS Satellite Navigation



Mike Crook
P.O. Box 4933
Pago Pago, AS 96799
07 June, 2011

Introduction

On June 4, 2011 the tank-ship *Blue Moon* departed Starkist Samoa dock bound for the designated ocean dump-site area approximately seven miles south of Pago Pago Harbor, American Samoa, on a routine wastewater disposal operation and for the purpose of monitoring this disposal of tuna cannery generated hi-strength liquid wastes into the waters of the Pacific Ocean. This monitoring and reporting were conducted in compliance with general permit conditions and Appendix A of Ocean Dumping Permits OD 93-01 & OD 93-02.

Chronology of Events

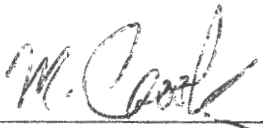
- 0505:** The *Blue Moon* departed Pago Pago Harbor bound for the dump-site location with Master/Principal Investigator, Chief and Mate on board.
- 0556:** The *Blue Moon* entered the dumpzone circle @ 14°22.5' S x 170°38.7' W.
- 0607:** The *Blue Moon* arrived at the dump-zone center, where observed east winds and southeasterly seas initially indicated disposal operations be conducted in the eastern dump-zone quadrant.
- 0620:** Control Station Monitoring. The *Blue Moon* arrived 1.1 nautical miles (NM) up-current or east (E) of the dump-zone center, where discrete seawater samples were taken from depths of 1, 3, and 10 meters. Water temperatures, color, pH and observed sea/sky conditions with stations' position were recorded (Table 1). Seas at this time were moderate with SE swells to 2.5 meters and east winds at 12 knots (kts.) with the barometer reading 29.62. Current set and drift, of the ship, were to the west at 1.0 knots. No floating materials or sea life were observed here.
- 0630:** The *Blue Moon* began disposal operations in the eastern dump zone quadrant and continued discharging cargo (high strength waste water) with a north (N) to south (S) reciprocal, elongated elliptical pattern, approximately 2.2 miles long (see Plot 1) until 0930 hrs.
- 0940:** Station One Monitoring. Discrete water samples were drawn from depths of 1, 3, and 10 meters. Water temperatures, pH, stations' position and water color observations were all recorded in Table 1. The east wind had increased to 15 kts. with cloudy skies. The waste plume was not visibly present here and was only apparent further down-current to the west some distance, (approximately 0.25 miles) away.. The current/wind drift of the ship was GPS determined to be westerly @ 1.3 knots. No sea life or floating materials were observed.

0950: Station Two Monitoring. Station two was sampled with the same procedures as station one with measurements and observations being recorded in Table 1. This position showed the typical coloration qualities of a partially dispersed wastewater plume; scattered patches of heavy glassy surface sheen, remnants of the north to south reaching track lines left by the discharge vessel. The average drift rate of the ship with current and wind was GPS determined here to be westerly (W) at a rate of, again, 1.3 knots between stations 2 & 3 (See Plot #1). No sea-life or floating materials were noted at this position.

1000: Station Three Monitoring. Seawater samples were collected and measurements taken as with Stations 1 & 2. This position, 0.25 NM down-current from Station #2, showed no visible sign of the waste plume, likely being the center of the discharge ellipse that was moving to the west. Sea & wind conditions remained the same as with the previous sample stations and the drift rate of the ship between Stations #3 & 4 was 1.1 knots, again, to the west.

1010: Station Four monitoring. This area showed more of the surface sheen over clear blue subsurface water, pretty much the same color qualities as with Station #2 with this sheen being moderate rather than the heavy sheen noted at Station #2. The westerly current/drift rate of ship was noted here to be at 1.0 knots. No floating scum or suspended particulate materials were observed at any of these sample stations.

1020: Station Five monitoring. Sampling for this final station was conducted at the visual leading edge of the waste plume and was located right at the zone center (see Plot #1). The plume remnants were clearly visible at this location as distinct streaks and broken up patches of moderate to heavy glassy surface sheen with clear, natural appearing blue waters further down-current to the west and no floating or suspended scum or particulates. No notable sea life was observed at this position or any of the previous stations other than a few random seabirds flying by. The final barometer reading was 29.64 when monitoring activities were concluded at 1030 hrs. The *Blue Moon* exited the disposal zone at 1040 hours and arrived back in Pago Pago Harbor to deliver the collected samples to the Starkist Samoa Co. laboratory at 11:30.

Prepared by 
Mike Crook, Principal Investigator

OCEAN DUMPING RESEARCH PERMIT: OD-93-01 & 02

Table 1

Date: June 04, 2011	Sea Conditions: Moderate w/ Southeast swells to 2.5 meters.				Wind: ESE @ 10 - 15 knots	Visibility: Fair to Good
	Barometer: 29.62 - 29.64		Current Set & Drift Rate: West @ average 1.2 knots		Sky: Cloudy w/ some passing rain	
Time	Station	Depth (meters)	Temp. (°C)	pH	Odor	Color
0620	Control	1	27.2	8.2	None	Clear and natural deep pelagic blue w/ no floating or suspended materials.
		3	27.2	8.2		
		10	26.7	8.2		
0940	Station 1	1	27.2	8.2	None	Same color qualities as Control Station, clear and natural blue with no floating or suspended particulate material.
		3	27.2	8.2		
		10	27.2	8.2		
0950	Station 2	1	27.2	8.2	Slightly Pungent	Streaks and patches of heavy, glassy surface from broken up, north to south running, vessel discharge track lines. No sign of floating or particulate materials.
		3	27.2	8.2		
		10	27.2	8.2		
1000	Station 3	1	27.2	8.1	none	Same color qualities as Control & Station #1
		3	27.2	8.1		
		10	27.2	8.2		
1010	Station 4	1	27.2	8.1	Slightly Pungent	Broad area of broken streaks and patches of moderate glassy surface sheen over deep, clear blue. No floating or suspended particulate or other material.
		3	27.2	8.1		
		10	27.2	8.2		
1020	Station 5	1	27.2	8.1	Slightly Pungent	Leading edge of the waste plume: Broken up, north to south running line of heavy surface sheen but no floating or suspended particulate materials noted.
		3	27.2	8.2		
		10	26.7	8.2		

SAMPLE STATIONS POSITIONS

	LATITUDE		LONGITUDE	
Control - C	14° 24.08'	South	170° 37.19'	West
Station 1	14° 23.95'	South	170° 36.89'	West
Station 2	14° 24.01'	South	170° 37.20'	West
Station 3	14° 24.02'	South	170° 37.65'	West
Station 4	14° 24.01'	South	170° 37.96'	West
Station 5	14° 23.98'	South	170° 38.27'	West

N ▲

170 40.23 W

170 36.82 W

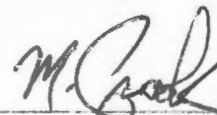
170 33.41 W

14 22.73 S

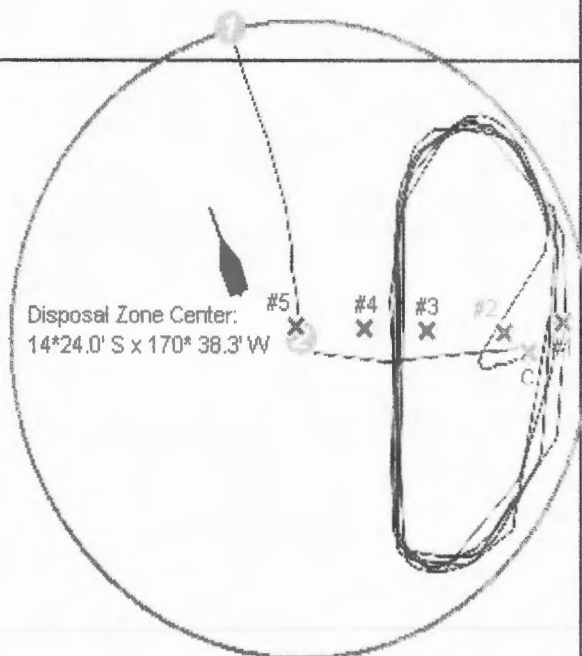
14 26.14 S

PLOT #1

Ocean Monitoring Sampling Stations
Control (C) and Sampling Stations #1 - #5
04 June, 2011



M. Crook, Investigator



←
Current e., West